International Union of Operating Engineers

THE INTERNATIONAL UNION OF OPERATING ENGINEERS

The IUOE is a progressive, diversified trade union which primarily represents Operating Engineers, who work as heavy equipment operators, mechanics, and surveyors in the construction industry, and Stationary Engineers, who work in operations and maintenance in building and industrial complexes, and in the service industries. The IUOE also represents health industry workers as well as significant numbers of public employees engaged in a wide variety of occupations.

Founded in 1896, the IUOE today has 400,000 members in some 200 Local Unions throughout the United States and Canada. The IUOE is the 12th largest union in the AFL-CIO. Further, nearly 100 apprenticeship and training programs, jointly managed by the IUOE and employers, work hard to ensure that IUOE members are highly trained, highly skilled craft workers

The IUOE offers employment and training opportunities to all regardless of race, sex, creed, color, religion, or national origin. Thus, a diverse membership is welcome—a membership that illustrates the commitment to the labor movement and tireless dedication to the industries the IUOE represents.

WHAT IS AN OPERATING ENGINEER?

Operating engineers are found on any project using construction equipment, working as heavy equipment operators, heavy equipment mechanics, or surveyors. Heavy equipment describes many types of machines used on a construction site, including cranes, bulldozers, graders, front-end loaders and paving equipment.

Although each operator has his or her favorite type of machinery to operate, operating engineers are masters of a variety of equipment. A broad range of skills keeps IUOE members employable, since employers' needs vary from project to project. Heavy equipment mechanics are also very important on the job site. Mechanics repair and maintain the equipment to make sure it is available as needed.

Operating engineers' work is essential to the smooth running of any construction project, especially since they must work with other crafts on-site. This occupation is worthy of a great deal of pride and sense of accomplishment for a job well done.

Y-12 National Security Complex:
Vulnerability Assessment Resource Center

The Vulnerability Assessment Resource Center (VARC) is a Y-12 Work for Others program other government agencies and private companies use to review their current protection strategies for critical assets and infrastructure.

To meet these needs, VARC partners with government and private-sector organizations to conduct security assessments within six areas of capability, tests new technologies and develops and provides vulnerability assessment and first-responder training.

VARC is a member of the National Safe Skies Alliance and serves on the board of directors for the National Safe Waterways and Seaports Alliance.

Our assessment capabilities include the following:

- **Buffer Zone Protection Plans and Validation** — Plans designed to protect and secure areas surrounding critical infrastructure and key resource sites such as nuclear plants, chemical facilities, etc. The concept is to develop a set of concentric areas surrounding a potential target. The buffer could be physical, software, or procedural. A buffer zone protection plan would include graduated physical security and security responses from the first layer of protection to the target. Validation can be accomplished by performance testing or computer simulation, Joint Conflict and Tactical Simulation or BlastFX.
- **Vulnerability Assessments, Threat and Risk Analysis, Critical Infrastructure Vulnerability Analysis** — This includes gathering data about the facility, finding vulnerabilities in protection strategies, and reducing the associated risk to an acceptable level.
- **Computer Simulation of Adversary Neutralization** — The facility is modeled. Adversary scenarios are developed, and simulated force-on-force exercises are run on the Joint Conflict and Tactical Simulation to determine whether the protection strategies are sufficient to neutralize the adversary force. Adversary neutralization is the act of stopping the adversary before his goal is completed.
- **Port and Waterway Security Assessments** — This includes gathering data related to the port or waterway, finding vulnerabilities in protection strategies and pathways, and offering security upgrades.
- **Hazardous Materials Transportation Evaluations** — Evaluation of possible threats, security strategies, route planning.

- **Chemical, Biological, and Radiological Dispersion Modeling** — Chemical, Biological, and Radiological Dispersion has been modeled using HotSpot or the Joint Conflict and Tactical Simulation to identify dispersion possibilities and containment strategies.

Vulnerability assessment training

Vulnerability Assessment in U.S. Schools Workshop — This workshop covers the appropriate and effective use of security technologies in U.S. schools and the fundamentals of conducting a systematic vulnerability assessment to identify existing targets and threats. It provides the participant with an in-depth look at the technologies currently available, the nature of threats, assessment planning and preparation activities, threat characterization, and the steps followed in conducting a vulnerability assessment to develop a list of appropriate security upgrades based on targets and threats. During this course, participants develop a viable vulnerability assessment plan that will increase safety for students and school personnel. This workshop is provided in a 12-hour instructional workshop or a 40-hour instructional workshop which includes a practical vulnerability assessment conducted at a school.

Fundamentals of Vulnerability Assessment for Facilities — The goal of this focused workshop is to cover the fundamentals of conducting a systematic vulnerability assessment. It provides the participant with an in depth look at the nature of the threat, assessment planning and preparation activities, threat characterization, and the steps used to conduct a vulnerability assessment using the Vulnerability of Integrated Security Analysis (VISA) methodology to develop a list of recommended security upgrades. This course leads workshop participants through a step-by-step process that result in developing a framework for a facility-specific vulnerability assessment plan. Instructor-led training is the primary facilitation method.

First responder training

International Union of Operating Engineers — The Vulnerability Resource Assessment Center (VARC) has a Memorandum of Agreement with the International Union of Operating Engineers, a national hazardous materials training program and experts in first response.

Paul L. Errico Associates — VARC has a working relationship with Paul Errico Associates to provide comprehensive emergency management and disaster mitigation training.

The Vulnerability Assessment Resource Center has partnerships with small private companies, 8(a)–small disadvantaged businesses, Historically Black Colleges and Universities (HBCU) and other educational institutions to support the needs of the Department of Homeland Security and other agencies involved in the protection of our nation's critical infrastructure.

Current federal customers include the U.S. Department of Energy (DOE), the National Nuclear Security Administration and Oak Ridge National Laboratory. We also work with the following organizations.

- American Defense Services
- International Union of Operating Engineers
- Perot Systems Government Services
- Tennessee State University

American Defense Services, Inc. (ADS) is a service-disabled, veteran-owned small business that provides services that counter foreign and domestic threats to U.S. corporations and public and private organizations in the areas of

- preliminary assessment,
- threat identification,
- threat assessment,
- threat mitigation,
- mitigation/protection plan assessment and
- risk management and insurance assessment.

ADS's prospective client base includes water and wastewater facilities, chemical manufacturing facilities, ports, transportation and distribution centers, transportation operations and electronic data processing and storage centers.

The International Union of Operating Engineers (IUOE) represents more than 120,000 stationary engineers who work in power plants, waste water treatment facilities, hospitals and other public and private facilities. The organization also represents 300,000 heavy-equipment operators who are trained and available to provide rescue and recovery services. These IUOE craftsmen were among the first to respond following the World Trade Center attacks on September 11, 2001.

The Operating Engineers National Hazmat Program is already working under cooperative agreements with DOE, the Environmental Protection Agency and the Department of Homeland Security to improve all aspects of safety and health for America's workers and to supply a more productive, safe work force.

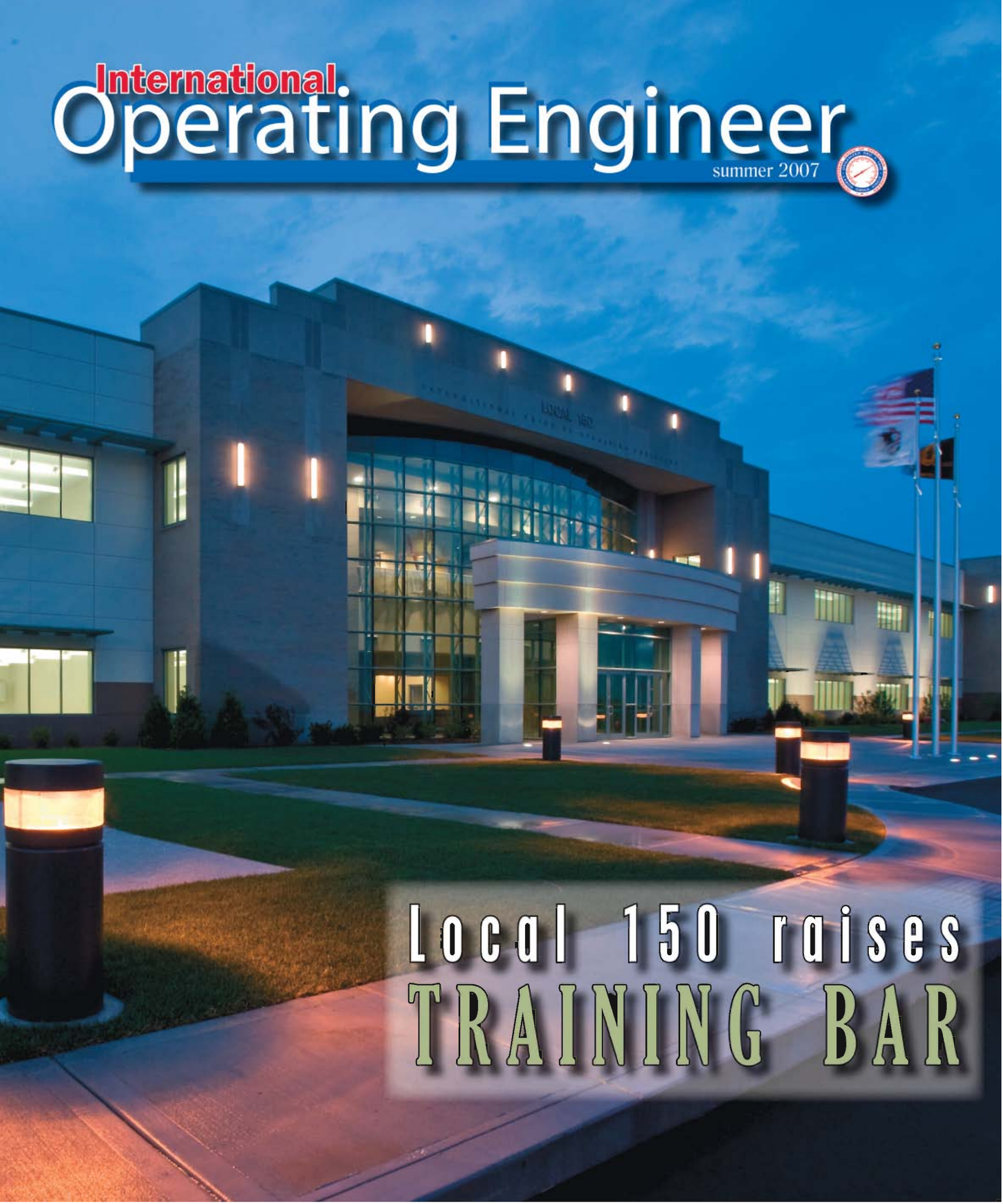
Perot Systems Government Services is a professional services firm with core competencies in

- decontamination and decommissioning,
- environmental service,
- engineering,
- information technology,
- nuclear facility operations and safety,

- organizational/business management,
- safeguards and security,
- safety and industrial hygiene,
- training and
- waste management.

Tennessee State University's College of Engineering was established in 1941. This HBCU is one of only 10 with accredited engineering programs. The college offers Bachelor of Science degrees in architectural and facilities engineering, civil and environmental engineering, electrical and computer engineering, mechanical and manufacturing engineering and computer science aeronautical and industrial technology.

International
Operating Engineer
summer 2007



Local 150 raises TRAINING BAR

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◄ ON THE COVER:
A night-time shot of Local 150's new training center in Wilmington, IL, about 50 miles south of Chicago (see pages 14-15). Photo copyright *James Stenkamp Photography*.

features

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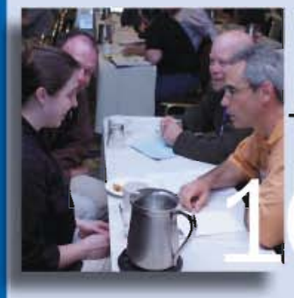
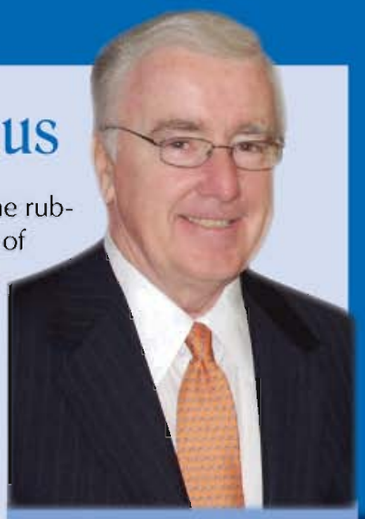
Editor - Christopher Hanley



departments

Training initiatives taking hold, gaining impetus



A wise man once said, "You can never, ever get too much of a good thing."

Maybe he wasn't so wise after all, because as much as that pronouncement may appeal to the senses, the premise obviously is debatable when applied to certain "good things."

But it does ring loud and true when applied to the IUOE training program, one of the many "good things" our members have available to them.

We can't overstate the importance and value of the myriad training initiatives offered to our members by the International Union and its local unions. Simply put, training is the key to our members' job security and advancement in the years ahead.

Construction contractors are bemoaning "the shortage of skilled craftsmen" in an industry where the equipment is only going to get more advanced, more technical; buildings and complexes already today are much more sophisticated and technologically challenging.

Remember, too, that skilled operating engineers are our primary resource in regaining market share throughout the U. S. and Canada. Contractors, owners and managers want skilled operators to improve their productivity and profitability. If they just wanted a warm body to fill a seat, they could go to the ABC or CLAC.

Training is the future for our members and our union.

That is why we have made training a priority issue for the IUOE. We must expand and improve our training programs to keep up with the evolving demands and technology advances in the construction and stationary industries.

We must -- and we will.

This issue of the *International Operating Engineer* magazine, with its many articles on various facets of the International's and its locals' training initiatives, spotlights the emphasis all of us are putting on training.

This commitment to training is real. We no longer are just paying lip service to the issue. We're devoting time, effort and financial resources to build our training programs into the class of the industry.

We started with the establishment of the National Training Fund, which will serve as the umbrella organization for all of the International Union's training programs, coordinating policies, strategies and activities.

We are listening to the folks who are directly involved in our training efforts on all levels of the union, the instructors and the administrators. That's where the rubber meets the road, where the success of our endeavors is rooted. We're asking their opinions, their needs and their suggestions on the direction and techniques to make our programs the best possible.

We now conduct our Training, Safety & Health Conference annually, instead of every other year. These conferences bring together some of the best minds in the training business, our instructors and administrators, and allow them to exchange ideas, concepts and real-life experiences that help all of us advance.

'... training is the key to our members' job security and advancement in the years ahead.'

The International is looking into possible ways to lend financial assistance to our local unions to pursue more aggressive, progressive training programs. We're not looking to re-invent the wheel here. We're thinking of a program modeled somewhat on the Organizing Grant Program. Again, this is in the exploratory stage and we will keep you posted on any progress we make in this direction.

With work in the pipeline industry projected to be booming for the next decade, we've increased substantially the number of our pipeline training classes. In addition, we are considering very seriously the establishment of an International pipeline training center to coordinate and conduct a greatly expanded pipeline training program.

We are exploring new teaching methods and delivery vehicles, such as the internet, to make training more accessible for more of our members, especially in the stationary field.

Knowledge is a powerful tool that can take individuals to heights they never before envisioned attaining. With that in mind, we intend to make available to every IUOE member the training resources to mold them into the safest, most skilled workers in the construction and stationary industries.

We've begun the process by reinvigorating a basically dormant program at the International level; we're working cooperatively with our locals and their training personnel; we're not just talking, we're implementing actions that will pay strong dividends long-term to our members.

We're well on our way, but, frankly, the best is yet to come!

Operating Engineers go to

Representative Steve LaTourette, left, IUOE Political Director Tim James, center, and Local 18 Legislative Representative Mark Totman meet to address Davis-Bacon prevailing wages for federal infrastructure projects.

"Members ask, "Why get involved?" 'We tell them, "Because it's your jobs at stake.'"

That was the political lesson both Local 49 Legislative Director Adam Duininck and Local 18 Legislative Representative Mark Totman gave discussing the importance of membership participation in their local's legislative political endeavors.

"Staying on top of key political issues is imperative," they said while talking on the steps of the U.S. Capitol.

Jim Kolb, staff director for Rep. James Oberstar, IUOE Political Director Tim James, center, and Local 825 Director of Government Affairs Mark Longo, right, discuss legislative issues.

They were part of a contigent of over 40 operating engineers from locals across the country in the nation's capitol for the International's first Legislative-Political Conference.

"In the last two years, the IUOE has stepped up its political activism efforts to a level unprecedented in this organization, turning the heads of not just those in Washington, but those across the country," said General President Vincent J. Giblin during his opening remarks welcoming attendees to the nation's capitol. "It is critical that everyone understand this is about building an extensive political presence."

That call to action proved to be more than just lip service with presentations by IUOE Political and Legislative Director Tim James, House Transportation Committee Chairman James Oberstar's Staff Director Jim Kolb, Democratic Congressional Campaign Committee Political Director John Vogel, AFL-CIO COPE Program's Strategic Planning and Technology Director Mike Noonan and other presenters that educated participants on key legislation that requires political activism from both the grass roots and national levels.

With federal infrastructure investment legislation such as the Water Resources Development and Clean Water Acts, and aviation, rail and school construction on the table in Congress that equates to billions of dollars in projects and hundreds of thousands of jobs for operating engineers. The conference emphasized the importance of a unified approach on behalf of locals and the International in developing a political infrastructure that protects the union's political interest on the local, state and federal levels.

To that end, it was stressed that is imperative that federal prevailing Davis-Bacon wages are applied to each of these key pieces of legislation.

"Simply put, the IUOE believes robust federal infrastructure investment creates the necessary economic platform that allows the private sector to compete more effectively in a global economy," said James.

James, along with LIUNA and UBC Legislative Directors Dan Kaniewski and Chris Heinz, updated participants on joint political outreach activities between the Laborers, Carpenters and Operating Engineers. The three unions forming the National Construction Alliance, emphasized

Local 49 Legislative Representative Adam Duininck, left, meets with Transportation and Infrastructure Committee Chairman James Oberstar (D-MN) to discuss legislation impacting operating engineers

Washington

that a key strategy is to continue to reach out to Republicans, in addition to Democrats, in order to ensure that Davis-Bacon prevailing wages apply on all federal projects.

Participants concluded the conference by breaking away for individual meetings on Capitol Hill with their respective lawmakers to discuss upcoming legislation that impacts their membership.

During Duininck's meeting with Minnesota Rep. James Oberstar in the congressman's office, Oberstar, who is chairman of the House Transportation and Infrastructure Committee, made an observation that best epitomizes the driving force behind the IUOE's legislative-political endeavors:

"Key infrastructure legislation is a matter of getting operating engineers a seat behind the control panel of a bulldozer or crane instead of on a seat on the bench at their union hall."

DCCC Political Director Jon Vogel provides IUOE members with information regarding key Democratic races in 2008.

LIUNA Legislative Director Dan Kaniewski, left, and UBC Legislative Director Chris Heinz updated participants on joint political outreach effforts between the Laborers, Carpenters and the Operating Engineers.

Alternative energy has Local 3 members going green

Contractors make switch to biodiesel fuel

Operating Engineer Larry Denton runs a biodiesel loader at Canon Manor.

As skyrocketing gas prices and global warming headlines thrust environmentalism into the mainstream, businesses and individuals everywhere are 'going green' - and the construction industry is no exception.

In an effort to help reduce the amount of emissions contributing to smog, Local 3 contractors Ghilotti and North Bay Construction recently switched their fleets of trucks and construction equipment over to biodiesel fuel.

Biodiesel is a clean-burning alternative fuel produced from fat or vegetable oil. This alternative fuel can be blended at any level with petroleum diesel to create a blend which can be used, with few modifications, in regular diesel engines.

Both companies are using blends of vegetable-based fuel on several projects involving Local 3 operating engineers, including the Canon Manor and Borges Ranch subdivision projects.

Local 3's Ben Sampietro, Jack Spears and John Setlak work on the Canon Manor subdivision – North Bay Construction's first project utilizing biodiesel fuel.

According to Ghilotti Equipment Manager Damon Calegari, the decision was an easy one to make and simply a matter of doing the right thing for the environment.

"We live and work here in our community and want to be good neighbors," Calegari said. "Biodiesel allows us to do that by dramatically reducing emissions that contribute to smog."

The move was also prompted by a mandate from the federal government, calling for ultra-low sulfur emissions in construction equipment. In working to comply with the mandate, Ghilotti and North Bay made the decision to explore the uses of alternative fuels. Their research concluded that biodiesel seemed to be the best option.

Apart from the odor - operators say it smells like French fries cooking - the transition to biodiesel has been trouble-free for both companies.

Ghilotti began earlier this year by testing a 10 percent biodiesel, 90 percent regular diesel blend in its fleet of about 150 trucks and heavy equipment. Now, Ghilotti uses 20 percent biodiesel in part because tests have shown biodiesel acts like a detergent in the fuel tank.

Local 3 members work on the Borges Ranch subdivision, one of Ghilotti's largest biodiesel projects. Front row, from the left, Landon Calciano, Luke Kelley and Willie Ghilotti. Back row, same order, Tristan Kennedy, Ray Breazealy, Bob Smith, Alan Mabry and Herb Roofener.

"It actually removes deposits in the systems," Calegari said.

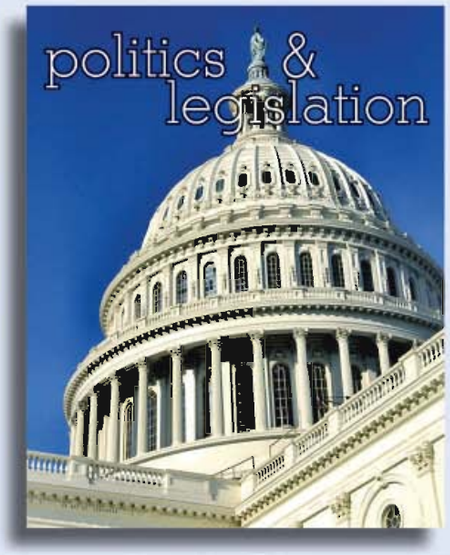
As a result of the 80/20 blend working so well, the company intends to use even higher concentrations of biodiesel in the future.

Like Ghilotti, North Bay Construction cautiously approached the switch to biodiesel by testing biodiesel in a 25-unit fleet on the Canon Manor subdivision earlier this summer.

"At the Canon Manor project, we changed fuel filters after the first few tankfills in the equipment, and the engines are better off," North Bay Construction President Steve Geney said. "We feel good about moving to a cleaner fuel and believe this can be a model for the industry."

North Bay Construction is now considering a shift to biodiesel for all 300 of its off-road vehicles. Before that happens, however, the company wants to complete its test project at Canon Manor. Costs will also have to be considered, since biodiesel averages anywhere from 25 to 30 cents more per gallon than regular diesel.

However, North Bay Construction is thinking long-term – the fact that it's more expensive is not as important as the end result of reduced emissions and cleaner air.



Congress addresses energy needs

Legislation a priority for IUOE jobs

Energy Legislation

With record high gas prices and increased public concerns about global warming trends, Congress is again addressing U.S. energy needs in the new 110th Congress. During the week of June 11th, the United States Senate began consideration of an energy package, which would increase the use of alternative energy sources such as ethanol, solar, wind turbines, bio-mass and other non-carbon based fuels.

There are many potential construction jobs in the installation of alternative energy facilities. However, the IUOE's traditional position has been that these alternative fuel options must be seen as supplements to more traditional energy options such as coal, nuclear and natural gas. Our concern has been that, while we want to be protective of the environment for future generations, environmental extremists often want to shut down traditional sources of energy which create thousands of jobs for heavy equipment operators employed at powerhouses and on pipelines.

The IUOE Legislative Department is working diligently with the other National Construction Alliance unions to maximize Davis-Bacon prevailing wage coverage on ethanol and other alternative fuel production facilities as the legislative process moves forward.

Later in the summer, the United States House of Representatives is scheduled to take up comprehensive energy legislation addressing alternative energy sources and energy efficiency issues.

Water Resources

The House and Senate are close to resolving their differences on a $14 billion Corps of Engineers reauthorization for dredging, harbor improvements, locks and dams, environmental restoration and water projects.

The House passed its version on April 19, 2007, by a 394 to 25 vote and the Senate passed its version of the bill on May 16, 2007, by a 91 to 4 vote.

The Bush Administration objected to the spending levels and threatened a veto, but both the House and Senate have clearly rejected these concerns by recognizing that the federal government must increase investment in water infrastructure to help the U.S. compete in global markets.

This legislation is a priority of the IUOE because of the tremendous impact for job-creation for heavy equipment operators and other construction crafts.

The importance of the energy and water legislation, along with other priority infrastructure issues, was emphasized during the IUOE Legislative-Political Conference in Washington *(see Pages 4-5)*. The 40 local union participants in the conference made these measures a prime topic of discussion when they paid visits to their respective senators and congressmen on the last day of the conference.

Again, it should go without saying that we must continue to ensure that Davis-Bacon coverage is part of all legislation dealing with federal projects. It's all about jobs – decent jobs – for our members.

Local 132's Mullins named WV Labor Commissioner

David W. Mullins, former **Local 132 (Charleston, WV)** Apprenticeship director, was appointed West Virginia Commissioner of Labor by Governor Joe Manchin. A 34-year veteran of the IUOE, Mullins is well-qualified to handle the state's workers' issues in his new job. He is shown here on the steps of the state capitol being congratulated by the governor and Local 132 officials. From the left are Mullins, Local 132 Business Manager Ronald Burdette, Gov. Manchin and Local 132 Assistant Business Manager Tommy Plymale.

Central Pension Fund

DOE withdraws its 401(k) proposal

On June 15, 2007, the U.S. Department of Energy withdrew a controversial pension proposal it first announced in April 2006. The proposal would have prohibited all DOE contractors from providing any type of pension benefit other than a 401(k) savings plan to new employees.

DOE had defended this proposal as necessary to bring its contracting costs under control, and to bring contractor pension benefits in line with the general trend of U.S. businesses that are abandoning traditional pension plans.

When the policy was first announced in 2006, there was an immediate groundswell of opposition from labor organizations as well as members of both parties in Congress. In response to this public opposition the Secretary of Energy, in June of 2006, announced a one-year moratorium on the policy during which time the Department would seek further input from the public.

This change in policy would have directly affected hundreds of IUOE members who are employed by DOE contractors throughout the country. Those members currently have defined benefit pension coverage through either the Central Pension Fund or IUOE Local Union pension funds.

Accordingly, when DOE reopened consideration of its policy this year, to protect the pension security of current and future IUOE members, the International notified the DOE of the IUOE's strong opposition to the proposed policy. Thereafter, staff of both the International and the Central Pension Fund met with DOE staff to explain their opposition, and on May 8, 2007 the International filed extensive public comments opposing the policy.

Importantly, this year not only did the labor movement oppose the DOE policy, but all of the major U.S. business groups likewise filed comments in opposition. While the IUOE and other labor organizations opposed the policy because it would have substituted risky 401(k) plans for the security of defined benefit plans, business groups, including the National Association of Manufacturers, the Business Roundtable, and the U.S. Chamber of Commerce strongly objected to the federal government dictating the type of retirement benefits that businesses can provide their employees.

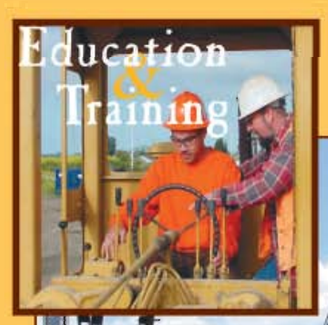
In addition to the comments of business and labor, there were also hundreds of critical comments filed by employees of DOE contractors who would have been directly affected by the policy. The most succinct of those comments said simply: "Don't be Bozos. These people need their pensions."

Finally, in early June the Appropriations Committee of the U.S. House of Representatives inserted language in DOE's funding bill prohibiting expending any funds to implement this proposed pension policy. Before that bill could be voted on by the full House, DOE withdrew the policy.

Regardless of why DOE finally withdrew this misguided proposal, the process provided a very public opportunity for business, labor, Congress and the general public to come together in unified opposition to replacing valuable defined benefit pensions with risky 401(k) savings accounts. An important victory was scored for retirement security.

Local 39 organizes hospital unit

Local 39 (San Francisco, CA) has organized a new group at Catholic Healthcare West Methodist Hospital in Sacramento, where the local now has 14 members it represents at the facility. Newly organized workers are shown in the accompanying photo. From the left are: Biomedical Engineer Mark Brideson, Stationary Engineer Michael Slish, Assistant Chief Engineer Robert Morrison, Stationary Engineer Larry Johnson and Chief Engineer Steven Street.



Local 39, 66 and 487 apprentices graduate

Local 487 (Miami, FL) celebrated the graduation of their 2007 apprenticeship class during a ceremony on March 25 at the local's training center. The ceremony was followed by a picnic lunch for members and their families. Pictured from the left are Local 487 Business Manager Gary Waters, Graduates Roderick James, Fasin Betancourt, Bryan Howard, Tarrell Wallace, Matthew Minchener, Yuniel Rouco, Padro Capeles, Jason Flood, Ludin Oviedo, Barney Roberts, Sean Fitzgerald, Roberto Cardona, Instructor Daniel McCullers and Apprenticeship Director Mark Schaunaman.

Local 66 (Pittsburgh, PA) honored 41 graduating apprentices at ceremonies held in conjunction with the District 1 Dinner Dance. Award winners were Darlington Bailey (1st place) and Robert Wilson (2nd place) in classroom training. For Field Training, Shawn Bertiaux won 1st place and Bert McMillen took 2nd. The class speaker was Angelo Terranella. Pictured front row, from the left, are: James Hurd, Joseph Evans, Corri Creighton, Kathleen Collins, Chris Chmura, Dawn Brewer, Shawn Bertiaux, Mary Jo Anderson and Greg Ahmadian. Second row, same order Brian Yanko, Cordie Wofford, Kurt Murr, Harry Moore, Michael Mazzarese, Frank Magill, Michelle Leddon, Juanita Rosa, Lloyd King, Grace Pritts and Michael Hutchison. Back row, same order, are: Shirley Nicopolis, Stephanie Nichol, David Williams, Mark Rowsey, Local 66 President Thomas Durkin, Business Manager and Trustee Chairman James T. Kunz. Jr., Administrator Steve Columbus, William Rhodes, Chris Jordan, and Angelo Terranella.

Graduating apprentices of Local 39's Apprenticeship Program gather for a class photo at the 44th Annual Graduation Dinner.

2007 "Apprentice of the Year" Sean Zuniga, right, is congratulated by Local 39 Business Manager/IUOE Vice President Jerry Kalmar.

Local 39 (San Francisco, CA) held its 44th Annual Apprentice Graduation & Dinner at the Marriott Hotel on March 3.

Forty eight apprentices received their certificates of completion and became Journeymen stationary engineers after completing their four-year apprenticeship.

Jerry Kalmar, Local 39 business manager/IUOE vice president, presented the "Apprentice of the Year" award to Sean Zuniga, an employee of ABM Engineering who works for Mount Zion Medical Center.

NEW APPRENTICESHIP BROCHURE

The IUOE National Training Fund has produced a new version of the International's popular *Earn While You Learn: A Career Guide to the IUOE* promotional brochure.

This marks the first revision of the publication in over six years, which now features a new full-color design and an informative Q & A section together with testimonials geared toward educating prospective apprentices and enhancing recruitment efforts.

Contact the IUOE National Training Fund at (202) 778-2639 for more information and to order your copies.

Canadian News

Local 793 Gallagher addresses Board, swears in new executive

Local 793 (Toronto, ON) recently held a swearing-in ceremony for the local's executive. Pictured from the left are: Eastern Ontario Area Supervisor Rick Kerr; Social Services Director Joe Redshaw; Business Manager/IUOE Trustee Mike Gallagher; South Central Ontario Area Supervisor Alex Law, who was appointed to vice-president; Training Coordinator Joe Dowdall, who was appointed to the executive board; Cambridge Business Rep Steve Deady, who was appointed to auditor; President Gary O'Neill; Northwestern Ontario Area Supervisor Brian Madigan; Barrie business Rep Dave Ottaway; and Bob McQueen, who is the new area supervisor for Southwestern Ontario. Bob Turpin, new area supervisor for Northeastern Ontario, is not pictured. Local 793 Business Manager/IUOE Trustee Mike Gallagher addressed a special executive board meeting at its headquarters, noting the local is in good financial shape and that membership in the local has risen to 10,000 members.

Local 946 members complete pipeline training upgrade course

Local 946 (St. John, NB) members finished an upgrade pipeline training course at the New Brunswick Training Institute. Instructor Richard Lagace facilitated the course using bulldozers and excavators and also covered all safety pipeline regulations that apply to area. Participants in the course, pictured top right included kneeling, from the left, Larry Marison, Andy St. Pierre, Melivn Savard and Ron Carrick. Standing, same order, are Gerald Hill, Normand Conway, Malcolm Milne, Instructor Richard Lagace, David Bordreau and Neil Logan. The additional photos below show participants on the training course.

Local 963 conducts advanced steward training

Local 963 (Vancouver, BC) conducted an Advanced Steward Training Course. The program was developed and taught by International Representative Ted Crockett and Karen Sasko of the Alternate Dispute Resolution Project. Topics included grievance handling, arbitration preparation and case law. "Their expertise was invaluable to the participants," said Business Manager Tim De Vivo. "They brought knowledge and experience into the classroom, effectively dealing with complex topics using real world examples." Pictured, front row from the left, are: Ted Crockett, international representative/co-instructor; Tim Chester, Local 963 vice president; Phil Tannahill; Barry Clarkson; Paul Loeman; Adrian David, Local 963 president. Bottom row same order, are: Tim De Vivo, Local 963 business manager; Livia Hisaoka; Harjit Khangura; Reg Campbell; Karen Sasko, co-instructor; Roy Johnson and Gus Polman.

Local 793 builds new Toyota, Kellogg's plants

Local 793 (Toronto, ON) Business Manager/IUOE Trustee Mike Gallagher, left, speaks with operating engineers working on an $800-million Toyota complex in Woodstock. Operating engineers were manning the cranes used to lift steel for a massive main assembly plant and paint plant at the site, in addition to operating equipment used to excavate and dig footings at the site. Once completed, the plant is slated to start production of its RAV4 sport utility vehicle in 2008.

25-year member Doug Shelley operates an excavator for Barr Construction at the new Kellogg's plant in Belleville. Local 793 operating engineers performed excavation, backfilling work for plumbing and subdrains around the building, as well as hoisting steel to ironworkers. Construction on the building started last fall and is scheduled to be operational year's end.

Local 772 continues to deliver on training

Local 772 (Hamilton, ON) conducted an Advanced Training Session for shop stewards in late May in Ottawa-Carlton. The training provided shop stewards with an opportunity to learn more about their role and responsibilities in the workplace, according to Local 772 Business Manager Greg Hoath.

The training covered topics such as the investigative process when handling grievances and arbitrations, legislative and workplace issues like the Privacy Act (PIPESA), workplace bullying and harassment, and a multitude of helpful tips from the instructors on fulfilling a shop steward's responsibilities.

The shop stewards also did some role-playing, taking the parts of union and employer in a mock arbitration case. "This mock case proved most interesting and informative," said Lynda Cloutier, a Local 772 business agent.

Taking part in the Local 772 Advanced Training Session for stewards (with their place of employment) were, front row from the left: Susan Nichol, Compass Group Canada at Kemptville Hospital; Anita Baker, Kemptville District Hospital; Noella Cleroux, Compass Group at Kemtville Hospital; Karen Sasko, Alternative Dispute Resolution Program consultant, and Valerie Shirley, Kemptville District Hospital. Back row: Greg Hoath, Local 772 business manager; John Payne, IUOE representative; Mario Bergeron, Natrel Inc.; James Peacock, Hillel Lodge; Paul Plante, YMCA_YWCA; Helen Rough, Kemptville Hospital; Robert Horning, Canadian Bank Note; Lynda Cloutier, Local 772 business agent, Ottawa office; Cindy Smiley, Healthcare Food Services, and Ted Crockett, IUOE representative.

Business Manager Hoath said the local "is dedicated to providing shop stewards and members with the tools to face the challenges in our workplaces and in serving the entire membership. The training is saving time and money with our stewards performing better investigative techniques leading to increased resolution of matters prior to referral to staff. Unnecessary costs and frustrations have declined significantly thanks to the efforts of the stewards."

Local 955...
a Macdonald family tradtion

Local 955 (Edmonton) Business Manager Ron Macdonald and his family have crane operating in their blood. Both his brother and nephew, Gerald "Cactus" Macdonald and Gerald's son, Dean, are also members of Local 955 and certified journeymen crane operators, as well as accomplished sideboom operators. Pictured, from the left, at the Local Training Trust Fund Sideboom Training Site are: Dean Macdonald, Ron Macdonald, Gerald "Cactus" Macdonald, Local 955 Sideboom Operator Leonard Enns, Local 955 Pipeline Business Agent Pat Meloche and IUOE Canadian Regional Director Derm Cain.

Local 905 helps pump operators get recognition in the industry

Following a 14-year absence, more than 250 boom pump operators are once again recognized as full-time workers in the construction industry thanks to the efforts of **Local 905 (Montreal, QC)**.

The long absence was a result of employers' refusal to observe the working conditions that the IUOE, affiliated with the Québec Building Trades, had succeeded in obtaining on behalf of crane operators. After several failed attempts by other organizations to reinstate the workers, several operators from various concrete pump companies approached Local 905 a year and a half ago for help and the local agreed to help.

Following several meetings with concrete pump companies, the Quebec Construction Commission (CCQ) and employer associations, Local 905 obtained the rehabilitation of the concrete pumps in the construction industry. Boom pump operators were once again recognized as a trade, as well as trailer pump operators.

Local 905 is now focused on training the operators by developing a school dedicated to the trade and establishing a curriculum in partnership with the CCQ and employers that will ensure the operators are experts in their field.

In less than two years, a process has been put in place to allow the reinstatement of these operators into the construction industry by July 29 and more than 95% of the 250 operators have already joined Local 905.

Local 905 Concrete Pump Operator Gilles Larivière, left, with International Rep Jean Marc Morin.

SAFETY & HEALTH NEWS

New program impacts DOE facility operations

The Department of Energy has implemented a new rule, 10 CFR 851, which establishes worker safety and health requirements that will govern the conduct of contractor activities at non-nuclear, as well as nuclear DOE sites. Both DOE contractors and their workers are covered by the new rule. Contractors under the rule include parent corporations and subcontractors that have responsibilities for performing work at a DOE site in furtherance of a DOE mission.

The rule requires that DOE contractor workers are provided with a workplace that is free from recognized hazards that can cause death or serious physical harm. To accomplish this objective, the rule establishes management responsibilities, worker rights, safety and health standards, and required training.

The contractor must provide DOE with a Worker Safety and Health Program that describes the methods they will use to implement the requirements of the rule.

Contractors must:

- Submit a WSHP to DOE by February 26, 2007
- Give labor organizations timely notice of development of the WSHP
- Comply with all requirements by May 25, 2007
- Identify closure facility hazards and controls within 90 days of identifying those hazards

Contractors have additional responsibilities such as:

- Establishing written safety and health policies and goals
- Providing mechanisms to involve workers in the safety and health program
- Establishing procedures for workers to report hazards and stop work
- Using qualified safety and health professionals

Workers must comply with the safety and health requirements of the rule and also have certain rights such as:

- Having access to safety and health information
- Observing monitoring of hazardous chemicals
- Receiving results of monitoring and inspections

Contractors that fail to comply with the rule are subject to civil penalties up to $70,000.00 per violation or contract penalties.

EPA recognizes local for energy conservation

Local 95 earns Energy Star rating

Local 95 (Pittsburgh, PA) earned Energy Star accreditation from the U.S. Environmental Protection Agency for its union hall, which distinguishes it as one of the top 25% buildings in the nation in terms of energy conservation.

On a scale of 0 - 100, the local scored a 99. The EPA recognized this accomplishment by presenting Local 95 with a *Superior Energy Performance* plaque during a formal ceremony seen in the accompanying photo on the right. EPA representative Margaret Hall, center, presented the Energy Star plaque to Local 95 Training Director Carl Luisi, left, and Local 95 Business Manager William Cagney.

"It is with great pride we accept this prestigious designation and take our place as a leader in energy conservation and the efficient operation of commercial buildings in the state of Pennsylvania," said Cagney while accepting the plaque on behalf of the local.

In an effort to increase energy conservation, Local 95 is also installing a solar panel, which will provide electric power to its training facility.

Local 399 members complete course

Local 399 (Chicago, IL) members turned out in large numbers to attend the local's Chief Engineers Course in May.

Fourth Circuit enforces NLRB order against LB&B

LEGAL briefs

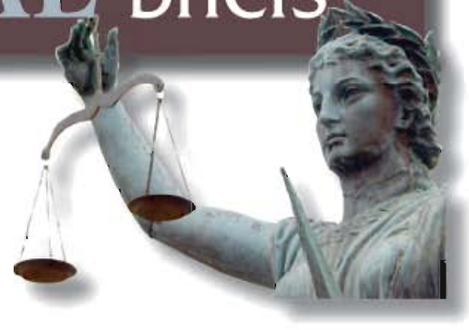
In May 2007, the Fourth Circuit Federal Court of Appeals upheld a decision of the National Labor Relations Board against LB&B Associates.

The court held that LB&B, a contractor managing aspects of a Department of Homeland Security's Plum Island facility for the study of exotic animal diseases, discriminatorily discharged James McKoy, a IUOE Local 30 (Richmond Hill, NY) member, for being a Union member and for engaging in activity to support the Union, and where antiunion animus was LB&B's motive for refusing to reinstate eight Local 30 members to their prestrike positions, for participating in a strike at the facility, lasting from August 2002 to March 2003.

McKoy was fired for leafleting on site and for voicing concerns that safety conditions at the plant were gravely sub par. McKoy had informed a director of Homeland Security and an aide to Senator Hillary Clinton (D. NY) that LB&B had been endangering workers by failing to provide adequate security for preventing unauthorized removal of biological pollutants and noxious materials from containment labs.

In support of striking Local 30 members, fifteen IUOE locals leafleted plants operated by LB&B's corporate partnerships nationwide, informing their employees of blatant wage cheating schemes and money wrongfully withheld under the Service Contracting Act

In its decision, the Fourth Circuit enforced an order for LB&B to pay McKoy more than $13,000 in back wages and interest, $75,000 in compensatory damages and more than $4,800 for job training expenses. It also ordered the company to pay almost $13,000 in legal fees to the attorney representing Local 30 in the strike.



Local 150's new training center has over 342,000 square feet of space, housing 30 classrooms, indoor training arenas, a testing lab and a 240-seat cafeteria, among other things

Local 150 takes training to new levels

"Wow, this is unbelievable!"

That was the most-heard reaction among the nearly 5,000 members and guests at the formal dedication and unveiling of the new Local 150 Training Center in Wilmington, Il in early July.

The new site, about 50 miles south of Chicago, is a joint venture of Local 150 and the Midwest Operating Engineers Apprenticeship Trust Fund. It sits on 300-plus acres and features facilities totaling 342,000 square feet. These facilities include an indoor training arena that can handle 18 pieces of equipment at a time, a 300-foot paving apron, a mechanics' bay, 30 classrooms, a state-certified tester lab, a 200-seat auditorium and a 240-seat cafeteria.

IUOE General President Vincent Giblin tells the gathering the new center is "top shelf in every respect" as Local 150 Business Manager Bill Dugan listens.

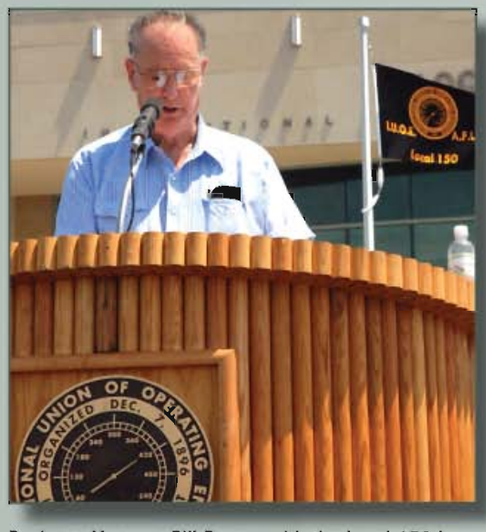
In his remarks dedicating the new complex, Local 150 Business Manager/IUOE General Vice President Bill Dugan said:

"This new training site is like no other in the world. The indoor arena will allow our apprentices and journeymen to hone their skills in any kind of weather. We expect to double the number of apprentices we train so as to enable us to meet the shortage of operating engineers that is already here. Our technician shops and testing laboratory will allow us to continue to train the most highly skilled mechanics and construction materials testers anywhere. In short, this facility will protect us, our families, and our union for generations to come.

"What I am most proud of is the fact the members of Local 150 paid for this beautiful facility exclusively. No government grants, no corporate donations—just the hard-earned wages of Local 150 operators. The members did it; we did it together.

"Now just look at the legacy you have left to your sons and daughters and their children and grandchildren."

IUOE General President Vincent Giblin, who delivered the keynote address at the dedication, echoed Dugan's comments. "Local 150 has here a facility that is top shelf in every respect; you have here a resource vital to your members' future – and to your future members," he said.



Business Manager Bill Dugan, with the Local 150 banner flying in the background, addresses the gathering.

"Training imparts skills, skills help our members get jobs and keep jobs. It's as simple as that. With this new training center, Local 150 is uniquely equipped to afford its members every opportunity to learn the craft and to enhance their skills."

The idea of building the center was approved by the local's officials about four years ago and basically was finalized in early 2004 when the members of the local voted to accept a 1 percent special dues assessment to help fund the construction of the facility.

Following the formal dedication and ribbon-cutting, tours of the facilities and a reception were held for members and guests.

Local 150 Business Manager/IUOE VP Bill Dugan performs the ceremonial ribbon-cutting at the new center, while General President Vincent Giblin and local officials lend a helping hand.

Members and guests take a tour of the Local 150 indoor training arena, where training will take place year-round, regardless of the weather.

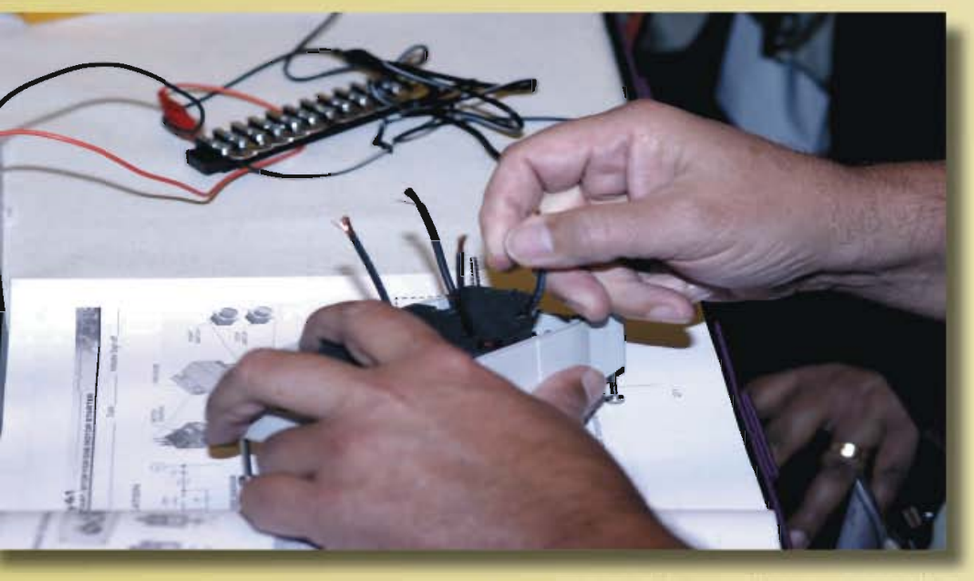
Local 150 Training Center features:

- Sits on 300-plus acres in Wilmington, IL, about 50 miles south of Chicago.
- The training center building and facilities have 342,000 square feet of space.
- There are 30 classrooms, with varying styles and specific functions.
- A 200-seat auditorium large enough to admit a piece of heavy equipment for demonstrations, and features network cabling so that apprentices can download presentations onto their laptops.
- The indoor training arena allows the running of 18 pieces of equipment at any given time.
- It features a 300-feet-long paving area that allows for asphalt and concrete simulation.
- One building contains a state-certified inspector/tester lab and tester-specific classrooms.
- There is an expanded mechanics' training bay.
- A 240-seat cafeteria and ultra-modern kitchen.

TOP: Cranes sit on their pads at the Local 150 training site. The local has sixteen cranes for training, including a tower crane.

BOTTOM: A picture tells a thousand words as it shows the training center's 200-seat auditorium and its capacity to bring in heavy equipment as a prop for teaching purposes.

INCREASING the quantity



IUOE's Training and Safety & Health Conference emphasizes learning and sharing information

Enhancing the teaching skills of IUOE local union training instructors was the dominant theme at the union's Training and Health & Safety Conference in Newport Beach, CA in late April.

Toward that end, the three-day conference consisted of classroom presentations and informal discussion groups that featured new technology demonstrations, new materials for instructor and apprentice orientation, teaching fundamentals, exploring training via the web and other e-learning, developing more uniformity in training standards, and a wide range of other topics.

IUOE General President Vincent J. Giblin echoed the conference theme in remarks to the more than 350 participants, mostly instructors and administrators from local union training programs.

"Our job is to offer our members – apprentices and journeymen alike – the best possible training. We do that so they can get and keep jobs...and provide for their families. That is why this and future conferences will be geared more directly to the needs and interests of our local union training instructors," he said.

Some of the other topics addressed during the conference included union education for members, classroom computer aids, health and safety teaching fundamentals, and recruitment prospects in the Job Corps and also the Air National Guard Red Horse Squadron.

Instructors for the conference included staff members from the various IUOE headquarters' training components, local union instructors and guest lecturers.

This was the first Training and Health & Safety Conference conducted under the auspices of the IUOE's National Training Fund. The NTF, headed by Executive Director Jeff Vincent, now is the umbrella organization for all IUOE training components, including H&P, Stationary, Pipeline, Hazmat, Job Corps and Excess Property.

A priority for the NTF is to learn about local union training needs and how it can best help them address those needs. "Overall, the conference provided a good starting point for the work that lies ahead as the NTF takes a hard look at the training strategies critical to the IUOE's future," Vincent said.

> "We are interested only in productivity and accountability in our training endeavors."
>
> - IUOE General President Vincent J. Giblin

Most of the participants said they liked the classroom-informal discussion groups format, indicating that networking with others in the IUOE training community is one of the main draws of the conference.

and quality of training

"This and future conferences will be geared more directly to the needs and interests of our local union training instructors. The bottom line is that there is lots to be done... but working together we will get it done."

- IUOE General President Vincent J. Giblin

april 23 - 25, 2007

newport beach, ca

Local 49 opens new training center

Preparing the next generation of operating engineers

"It's a great time to be a 49er!" declared IUOE General President Vincent Giblin during the grand opening of Local 49's state-of-the-art training center in Hinckley, MN.

That sentiment could be seen on the faces of the 3,000 members and guests who got their first glance of the new 65,000 square foot facility.

Local 49's new 65,000 square-foot training center.

"You only need to look around you to appreciate how far our local has come in such a short time," said Local 49 Business Manager Glen Johnson. "When we initiated our apprenticeship fund in July 1978, the negotiated rate was 4 cents per hour – that amount now stands at 40 cents per hour, an increase of over 1000%."

IUOE General President Vincent Giblin, left, Business Manager Glen Johnson, center, and Local 49 trustees perform the ribbon cutting ceremony.

Located on more than 384 acres, the new training center has five classrooms that accommodate over 40 students each. It also features a large auditorium that holds over 160 students and a computer lab equipping students with the necessary tools and technology needed to enhance their skills.

The new center is staffed by three full-time office assistants, six full-time and four part-time instructors. All Local 49 crane instructors are NCCO certified, in accordance with the state's new mandate, to test members for crane certification.

In 2006, over 3,000 members took a wide array of classes offered at both the local's old training center and various out-of-state locations. That number has continued to increase dramatically over the last three years.

Currently, Local 49 has 275 apprentices enrolled and participating in the heavy-highway program and its new crane apprenticeship program. Those numbers are expected to accelerate now with the completion of the new training center.

"Thanks to the foresight and initiative of Local 49's leaders, you have here today a resource vital to your members' futures... and to your future members," said General President Giblin. "Training imparts skills, skills help secure jobs – it's as simple as that."

Local 49 Legislative Representative Adam Duininck, left, and Business Manager Glen Johnson, center, speak with Rep. James Oberstar.

Minnesota Attorney General Lori Swanson addresses attendees at the open house.

A Local 49 member gives one of the attendees a chance to sit behind the control panel of a bulldozer at the new facility.

New confined space train-the-trainer offered

The National HAZMAT Program will hold its Confined Space Train-the-Trainer course August 13 – 17. The course has been improved based on feedback received after the initial course and includes more hands-on activity, and will be conducted by NHP staff and IUOE Master Instructors.

Participants who complete the course will receive the Occupational Safety and Health Administration Course 2226 Confined Space Certificate. Participants will also receive a certificate from the IUOE National Training Fund stating the participant has completed a confined space course and, with the appropriate experience, the training satisfies the OSHA requirement for a confined space competent person. Should an employer or contractor choose to accept this IUOE training, the successful participant may conduct confined space competent person training on their return to their local union. The course will also satisfy the annual requirement for the HAZWOPER refresher.

Confined Space Train-the-Trainer will contain seven hands-on workshops designed to simulate issues and scenarios encountered while working with or in confined spaces. Workshop 1 will expose the participant to the different types of confined spaces. Participants will evaluate a number of confined spaces and classify each based on the 29 CFR 1910.146 requirements. Students will be broken into groups and asked to calibrate and use industrial hygiene equipment to assess the state of a confined space before entry during Workshop 2. Workshops 3 and 5 will both be Permit Required Confined Space Entries, the first entry participants will contend with simulated physical hazards and the second entry will deal with simulated toxic atmospheres. Workshop 4 will address the reclassification of a PRCS. During Workshop 6 participants will be asked to evaluate a trench for confined space hazards. Workshop 7 will be devoted to confined space rescue.

In addition to the workshops, participants will also see a confined space ventilation demonstration and participate in an OSHA Letters of Interpretation and Fatal Facts teaching exercise. While the course will include some PowerPoint, it will focus mainly on hands-on activity.

Significant time will be dedicated to understanding the Confined Space Flow Chart located in 29 CFR 1910.146, Appendix A. Each participant will receive a CD with material to use on their return to their local union training program. The CD will include electronic copies of all material used during the course as well as additional material each Master Instructor may choose to use to facilitate their teaching style.

To sign up for this course or receive further information please contact the NHP at (304) 253-8674 or hazmat@iuoeiettc.org.

NHP 2007 - 2008

Instructor Training Schedule

COURSE	DATES
OSHA 502 Construction Industry Instructor Update	Aug. 6 - 10, 2007
Confined Space Train-the-Trainer	Aug. 13 - 16, 2007
MSHA Instructor Trainer	Sept. 5 -7, 2007
Trenching, Shoring and Excavation Train-the-Trainer	Sept. 10 - 14, 2007
OSHA 502 Construction Industry/OSHA 503 General Industry Instructor Updates	Sept. 30 - Oct. 5, 2007
OSHA 500 Construction Industry and OSHA DSW Worker Train-the-Trainers (Session 2 of Initial Instructor Training)	Oct. 15 - 22, 2007
Teaching Techniques - Intermediate to Advanced	April 28 - May 2, 2008
Respiratory Protection Competency Training	May 19 - 23, 2008
HAZWOPER and OSHA 501 General Industry Train-the-Trainers	June 2 - 13, 2008
CPR Train-the-Trainer	June 23 - 25, 2008
Teaching Techniques - Beginner to Intermediate	July 14 - 18, 2008
OSHA 502 Construction Update	Aug. 4 - 8, 2008
Confined Space Train-the-Trainer	Aug. 11 - 15, 2008

The National HAZMAT Program 2007-2008 Instructor Training Schedule is developed to meet the requirements for Master Instructor refreshers and is based on local union training programs' input. The schedule also supports the NHP's ten-year plan. This is accomplished by offering sufficient instructor training/development courses to bring all active instructors back annually to enhance their skills and knowledge. The plan builds an instructor's credentials while ensuring that necessary refreshers are received to maintain those credentials.

If you or your Instructor are interested in attending these courses please contact the NHP at hazmat@iuoeiettc.org or call (304) 253-8674. Your Business Manager will be notified to approve your attendance at any National HAZMAT Program trainer courses.

MSHA train-the-trainer and upcoming conferences

The National HAZMAT Program, as part of its Mine Safety and Health Administration (MSHA) Alliance, will be participating and presenting in this year's upcoming MSHA conferences to be held at the National Mine Health and Safety Academy in Beckley, West Virginia. IUOE members who work in facilities covered by MSHA can benefit from these conferences, as well as contractors.

The Construction, Maintenance, and Repairs Safety Seminar will be held September 5-6, 2007. Construction workers, mechanics, electricians, demolition workers, welders, crane operators, riggers, and safety professionals from throughout the United States participate in this annual conference. This year's conference will focus on hands-on workshops for cranes, fall protection systems (in particular tie off systems), trench rescue, and cross-referencing MSHA regulations with OSHA regulations. Contractors are encouraged to participate.

During this seminar, the MSHA Alliance partners will be offering a MSHA Instructor Course September 5-7, 2007. Completion of this course is a MSHA requirement for an instructor to obtain instructor certification for Part 48 Miner Training. Attendees will also have the opportunity to attend some of the workshops offered during the Construction, Maintenance, and Repairs Safety Seminar.

The annual Training Resources Applied to Mining (TRAM) Conference will be held October 9-11, 2007. The three-day conference features over 60 presentations by more than 100 industry and government professionals, with topics ranging from using behavioral science to increase safety performance, simulator training, distance learning for mine inspectors, and self-contained self rescuer (SCSR) donning procedures, to understanding new mine safety regulations, and assessing the true cost of accidents to mine operators. In addition, over 40 exhibitors showcase training materials and innovative safety products used in mining. Last year's conference had a record attendance of over 620 participants.

For more information on these conferences or how to register please call the National HAZMAT Program at (304) 253-8674 or hazmat@iuoeiettc.org. Additional information on these conferences can also be found on MSHA's website at www.msha.gov.

OLD TOOLS, BUT NEW APPROACHES for teaching IUOE members

A Teaching techniques course for training Master Instructors was conducted May 14-17 in Beaver, WV, by The Lippy Group, LLC.

Thirteen instructors attended this course, which was offered as a result of a need expressed by instructors from feedback of training attended at the NTF Training Facility. The Teaching Technique course was highly interactive with hands-on exercises, group activities, and practical use of references for problem solving that many instructors encounter. Presentation technique do's and don'ts of PowerPoint and the use of alternative approaches to deliver more complex concepts such as understanding chemical designations and industrial hygiene measurements were discussed.

Students came away with a better understanding of presentation techniques to enhance their skills and practical use of references in their training.

Guidance document to be distributed

The National HAZMAT Program announces it will begin distribution of the guidance document, Building Alliances Between Operatiing Engineers and Emergency Responders to Save Lives During Disasters. Distribution of the document will begin June 8, 2007. IUOE Business Managers, IUOE Training Directors, state Urban Search and Rescue (USAR) Teams, various government agencies, and other emergency response groups will receive the document. The guidance document was produced under an OSHA Susan Harwood Grant and was developed by a steering committee consisting of representatives from IUOE Local Unions who have successfully formed relationships with emergency response groups, representatives from emergency response groups including state USAR teams, and both hoisting and portable and stationary operating engineers.

The distribution folder each Business Manager and Training Director receives will include the guidance document, three handouts and a PowerPoint presentation. The three handouts are designed for IUOE Local Unions, contractors, and USAR teams. The PowerPoint presentation reflects the guidance document and may be used by itself or with the OSHA Disaster Site Worker 7600 course.

The guidance document facilitates how IUOE Local Unions can form proactive working partnerships with emergency response groups, focusing on lessons learned from past experiences. For additional information contact the National HAZMAT Program at hazmat@iuoeiettc.org or call (304) 253-8674.

AROUND the locals

Local 66 member saves a life

Local 66 (Pittsburgh, PA) operating engineer John Scypinski was recently honored by both All Crane Rental and United Refinery for his efforts to revive fellow brother William Otteni at a United Refinery site on April 10, 2007. Pictured above, from left to right, are: Local 66 Business Representative Dale Niemenski, John Scypinski, Bill Slagel of All Crane Rental and Local 66 President Thomas Durkin.

Local 39 presents 2007 educational scholarships

Local 39 Business Manager Jerry Kalmar, center, presents its 2007 Educational Scholarship Award to Bronwen Marshall-Bass and Jacob Jackson.

Jerry Kalmar, business manager of **Local 39 (San Francisco, CA)** and an IUOE vice president, presented its 2007 Educational Scholarships during the Apprentice Graduation & Dinner held in March.

"A cornerstone of Local 39's success is training and our continuing education classes for members," said Kalmar. "The Local 39 Educational Scholarships, presented to our children and grandchildren is an extension of our commitment to education."

This year's scholarship winners were Bronwen Marshall-Bass and Jacob Jackson. Ms. Marshall-Bass lives in Sacramento and is the daughter of Barbera Bass who works for the Sacramento Public Library Authority. Jacob Jackson's father is a chief engineer for Growers Ice Company. The scholarships pay up to $15,000 per year for four years to defray college expenses.

Local 234 members donate to charity

Local 234 (Des Moines, IA) members working in Unit IV of the Council Bluffs Energy Center, are seen here presenting Children's Square USA President and CEO Carol Woods with a check for $3,337, earmarked to assist needy children in the Council Bluffs area. The charity has been serving children in need since 1882 and now serves over 425 children daily, giving them the skills and values essential to a successful life.

Local 399 suceeds in unfair labor strike

Local 399 (Chicago, IL) members turned out in large numbers to picket 19 South LaSalle. Thanks to their support and solidarity, the local successfully prevailed in an unfair labor strike against Blueline Services, Inc. and Colonnade Management. The settlement terms included back pay and recognition.

Local 302 and Job Corps team up -

Training tomorrow's operating engineers today

Local 302 (Bothell, WA) is coordinating with the Fort Simcoe Job Corps' Center in preparing young men and women to become apprentices in IUOE local unions. A team of four instructors, members of Local 302, with over 65 years of combined experience in the field, work at the 40-acre Fort Simcoe training site teaching students the skills needed to become heavy equipment mechanics and operator apprentices.

The instruction, provided through a contract between the US Department of Labor and the IUOE, gives students 1,000 hours of training as mechanics or operators and teaches them how to service, repair and operate heavy equipment.

In addition to operating equipment at the Fort Simcoe Job Corps Center, students gain hands-on experience by performing community service projects in the field. Classes are currently building two baseball fields and three soccer fields for the Highland School District. These projects allow students additional operating time, as well as opportunities to perform grade setting and checking. Mechanic students service and repair all of the equipment in the field and learn basic welding skills in the center shop area.

Instructor JohnVan Epps helps Jacob Miller, a trainee at the job corps center, weld a bracket on a motor grader.

Job Corps students, from the left, Austin Botts, Jimmie Gee, Jacob Miller, Blake Evans, Steve Mann, Michael Stryffer, Robert Jarett and Kayla Cochron are pictured during one of their community service projects.

While providing year-round training to students, the center's behavior standards, which require drug testing, reporting to work on time, responding to supervision and demonstrating monthly progress toward achieving training requirements, teaches them the skills necessary to keep a job in the construction industry.

For students entering the Job Corps without a high school degree, a General Education Diploma or High School Diploma program is available. These programs, along with tutoring, enable students to develop basic skills needed to perform all aspects of their jobs.

Following graduation, participants are evaluated on their aptitude and ability prior to referral to IUOE locals for apprenticeship interviews. Instructors continue to develop and utilize partnerships with locals throughout the region to place students who possess the skills and abilities needed to be an operating engineer.

Union locals are encouraged to refer applicants who do not have high school degrees or basic operating skills to Job Corps for enrollment in the training program. Upon graduation, applicants can be referred back to those locals for apprentice positions.

Instructor Jim Lawrence and Trainee Brad Spencer instructing on operation of a back hoe.

MEMBERS' service

Local 49 (Minneapolis, MN) held its annual 25-year service awards dinner at its union hall, recognizing members for their service and presenting them with a service pin, plaque and belt buckle. With more than 120 members and guests in attendance, keynote speaker IUOE General President Vincent J. Giblin thanked members for their commitment to the union and congratulated them on their achievement. Business Manager Glen Johnson and other Local 49 officers presented the honorees with their service awards. Local 49 members, above, are seen with IUOE General President Vincent J. Giblin, back center, and Local 49 Business Manager Glen Johnson, President Tom "Butch" Pariseau, Vice President Joe Ryan, Treasurer Jim Hansen and Recording-Corresponding Secretary Kyle Jones.

Local 49 Business Manager Glen Johnson, left, is pictured with IUOE General President Vincent J. Giblin, who served as keynote speaker for the annual 25-year dinner.

Local 926 (Atlanta, GA) recently held its "Years of Service" Awards ceremony honoring members. Business Manager Phil McEntyre, right, presented Grady Townsend with a service pin for his 55 years of service.

50-year members Marshall Purdy, left, and W.C. Seagraves, center, were presented with service pins by McEntyre commemorating their service.

45-year members, from the left, Bobby Durden and Roy Lawrence Jr., were presented with service pins by McEntyre.

ABOVE: 40-year members Willie Wallace, left, and Jesse Roberts, center, receive their service pins from McEntyre.

RIGHT, TOP: 35-year members, left to right, Phil Weeks, Hershel Peek, Earlie King, McEntyre, Gene McCoy, Gerald Kerr and Wayne Ellis.

RIGHT, BOTTOM: 30-year members, l - r, Barry Goodwin, Charles Dalon, Tony Watts, McEntyre, Donny Butler, Lee Wolfe, Calvin G. Lee and James Merck.

Local 925 (Mango, FL) paid tribute to Thomas Rowland on the occasion of his 55th year of service with the IUOE. Brother Rowland was initiated December 22, 1951 and is a second generation Operating Engineer. Shown here with a number of his co-workers, he receives an award for his accomplishment. From the left are Jay Legrand, Willis Richley, David Carlisle, Tab Thomas, Dan Bracewell, Thomas Rowland, Tony Balliet, Dennis Williams, CM Jennings, Andrew (Mayberry) Taylor and Ken Schmit.

More of Thomas Rowland's co-workers were on hand to wish him well. Front row, from the left: Dennis Williams, CM Jennings and Willis Richley; second row: Larry Colson, Mike Riley, Thomas Rowland and David Carlisle; third row: Tab Thomas, Tony Balliet, Dan Bracewell and William Littlechild; fourth row: Blaine Young; fifth row: Bill Grizwold, Andrew Taylor, Robert Penney and Tom Miller; back row: Terry Burtz, Bill Stewart and Ashley Gray.

Local 520 (Granite City, IL) Business Manager Delbert Birkner, standing center, presented service pins to members during a recent banquet. He is pictured here with 35-year honorees, seated from the left, are: James Schwartz, Richard Wegener, Gary Potterm Glen T. Dale, Larry Ganzer and Ray Nattier. Standing, same order, Lee Pitmon, Mickey Crippen, Birkner, Charles Riggins and Gary L. Williams.

Other 35-year service pin recipients included, seated from the left, Delmar Krotz Jr., Willie Mumphard, David Holthaus, Butch Dohrman and Rodney Rausch. Standing, same order, are Henry Grabbe, Ron Johnson, Birkner and George Robinson.

▶ Local 520 30-year members, front row from the left, are: James Alexander, James Harmon and Michael Awalt. Standing is Birkner, left, and Glenn Wofford.

◀ Local 520 25-year member Michael Parkinson, left, and Business Manager Delbert Birkner.

Local 66 (Pittsburgh, PA) honored members for their years of service. Pictured above are 60-year members, seated from the left, Frederick Sanctic and Richard G. Hibbard. Standing, l - r, are Vice President Ronald Sapp, Financial Secretary Francis Lafferty, President Thomas Durkin, Business Manager James Kunz Jr., Treasurer Regan Robertson and Recording-Corresponding Secretary Leo Petrone.

TOP, RIGHT: 50-year members seated, from the left, are: Harry Mateer, John Slowik, Joseph Deiuliis, Harvey Eyles, Paul Mertz, Jacob Streit, William B. Nigro, Jr., Carmen Sousa and John P. Jackson. Standing, same order, John K. Burns, Gil Whitmer, Jack B. Anderson, Lafferty, Sapp, Durkin, Kunz Jr., Robertson, Andrew Hack, Petrone and Carl Mengel.

BOTTOM, RIGHT: 40-year members, seated, l - r, Lafferty, Frederick McKnight, Larry Hayes, Ronald Barwell, Fred Hofrichter, Sr., Kenneth McCelland, Raymond Curtis and John Fowler. Standing, l - r, are Sapp, Durkin, Kunz Jr., Robertson and Petrone.

Local 399 (Chicago, IL) celebrated its "Gold Card" 50-year members during their smoker fundraiser. Local 399 Business Manager/IUOE Vice President Brian Hickey, upper left, is seen with the honorees. In no particular order are: Thomas Brosnan, Thomas Corridon, Melvin Daley, Thomas Darcy, John Doyle, Francis Gibbons, Ronald Lagron, Michael Lyons, Patrick Molloy, William Murphy, James Nix, William Poynter, Michael Reilly, Edward Reiten, Thomas Ryan, Carl Sedall, James Sheehy, Edward Shields, Patrick Sullivan, John Vitton and Robert Woloszyk.

IUOE PHOTO GUIDELINES

IUOE appreciates the local news stories and accompanying photos we receive for The Operating Engineer. As a result of the IUOE making the transition from a tabloid newspaper, with mostly black and white photos, to a full-color magazine there are photo submission requirements that must be met in order to ensure the quality publication you deserve. In light of the widely embraced use of digital photography, we offer the following requirements regarding both traditional film and digital photo submissions.

TRADITIONAL FILM PHOTOGRAPHY

4 x 6 (or larger) glossy color prints on photographic film paper (from photo finishing services, such as your local drug or retail store developers). Please do not send ink jet, color copier, or color laser prints – they are not suitable for publishing purposes.

DIGITAL PHOTOGRAPHY

A 4.0 megapixel camera or better is recommended for photos to be published. Printing presses require a minimum of 300 dpi (dots per inch) for color photographs-more commonly called "high-resolution" photos. This means subjects should be photographed using the highest quality setting on your digital camera, also known as the "fine/superfine" or "large" setting.

Images should not be manipulated in any way for size, cropping, color mode, quality of color, or sharpness. Download the images from your camera (only JPEG or TIFF formats are acceptable) and submit digital photos on a CD to the attention of the IUOE Communications Dept. or e-mail them to jbrady@iuoe.org or jbrown@iuoe.org. Photos submitted must also include a typed description of each photo identifying who is in the picture and what is taking place (preferably in Microsoft Word format). We also ask that when staging photos such as service awards, you group as many recipients into each photo as possible, rather than submitting separate photos for each honoree or small group of honorees. We need your cooperation on this so we will be able to feature as many locals as possible. We realize that, for various reasons, everyone may not be able to adhere to all of these guidelines. However, if you can follow these recommendations, it enables the IUOE to better highlight your local's story and accompanying photos.

Death Benefits paid March 2007

Local 3
San Francisco, CA
Ernest Christianson
Delbert Creekmore
Albert Dalton
Bobby L. Fish
Earl H. Garner
Wayne Green
James J. Heath
John Lafranchi
Gale J. Madsen
Clif G. Percy
Gordon Rasmus
Oded Reinin
Arthur S. Richards
C.H. Rumbaugh

Local 4
Boston, MA
John F. Parks

Local 9
Denver, CO
Robert L. Barnett
William J. Dopheide
Wallace Engle
Henry R. Kirkham
William J. May
Gerald D. McFarland
William A. Middleton
Judson O. Laur

Local 12
Los Angeles, CA
Dave Argo
John W. Barling
Bob R. Barney
Paul N. Bryant
Lewis D. Eaton
Henry J. Oliva
Abelardo C. Vega
Herbert R. Vickers
Joseph C. Walden
George W. Wamben
F.V. Wells
Doyce W. Williams
Rodney D. Williams
R.D. Wiseman
Keith L. York

Local 14
New York, NY
Raymond Berven

Local 15
New York, NY
Jack Boccasini
William F. Heaton
John E. Turnure

Local 17
Buffalo, NY
Virgil P. Smith

Local 18
Cleveland, OH
Clayton N. Harder
Henry F. See
Charles J. Seifert
John D. Short
Irvin Smith
Charles W. Stiles

Local 34
Inactive Local
John L. Rathbone

Local 37
Baltimore, MD
John B. Dickel
John R. Maresh
Robert A. Pierce

Local 49
Twin Cities, MN
Severin Malisheske
Sherby R. Woods

Local 57
Providence, RI
George Alves

Local 66
Monroeville, PA
Paul E. Buckels
Edward L. Fox
Anthony Fretloose
Edward Hack
Charles A. Snyder
Walter Stossel
Leo D. Taylor
Henry L. Venetta
Roger Volkman
Robert Q. Williams

Local 68
Newark, NJ
Clarence G. Reed

Local 98
Springfield, MA
Joseph J. Couture
Conrad Desrochers

Local 101
Kansas City, MO
Earnest G. Ballard

Local 106
Albany, NY
Howard A. Collins
Willie A. Kundert Jr.

Local 115
Vancouver, BC
Robert J. Lindsay
Joseph A. McKinnon
Frank G. Sarka
Francis J. Smitheram

Local 138
Hempstead, NY
Walter Facompre

Local 139
Milwaukee, WI
Arthur F. Blaedow
Forrest C. Bune
William H. Day
John E. Helmuth
Dale Knickelbine
Norman O. Nelson
Jerry O'Brien
Phillis M. Olson
Alvin L. Peterson
Homer R. Shockley
Joseph Vargo

Local 147
Norfolk, VA
Edward W. Trent Sr.

Local 148
East St. Louis, IL
John A. Spring

Local 150
Chicago, IL
Edward Cetwinski
Michael L. Clark
Del Freund
Patrick J. Geary
Wendell Griffis
George J. Hoehn Jr.
Fred D. Jungels
Wallace A. Lee
Michael Lescak
Kenneth W. Mark
Wayne E. Stahl

Local 280
Richland, WA
Daniel R. Woodcock

Local 286
Renton, WA
Roy D. Madison
Robert M. Rogers

Local 302
Seattle, WA
Ronald E. McMillan
Ted Mummey
J.V. Owensby
Louis J. Smith

Local 310
Green Bay, WI
Edward Klaubauf
Frank L. Martin

Local 317
Milwaukee, WI
Donald B. Hakes
Raymond Schaefer

Local 318
Marion, IL
Cecil Church

Local 320
Florence, AL
Ottis H. Smith

Local 324
Detroit, MI
Archie Bergeron
Raymond Blok
Dalbert Dalbeck
Blake Good
Vincent J. Locricchio
Robert Mathews
Lawrence E. Mundinger
Donald Pellizzaro
Henry D. Stickney
Dana L. Sweet
James L. Worsham

Local 347
Inactive Local
Marshall S. Smith

Local 370
Spokane, WA
Edward W. Simmons

Local 399
Chicago, IL
Joseph A. Peters

Local 400
Helena, MT
Ivan M. Newman

Local 406
New Orleans, LA
Eugene D. Garrett
Charles E. Langley
Walter Stratz

Local 428
Phoenix, AZ
Arthur J. Edmonson

Local 478
Hamden, CT
Frank J. Vaiciulis

Local 515
Inactive Local
Clifford L. Cooley

Local 520
Mitchell, IL
Glen P. Rawe

Local 525
Inactive Local
Harry E. Schneider

Local 542
Philadelphia, PA
Ernest Dorman
John Potter

Local 545
Syracuse, NY
Stephen Chuhralya
John Edwards
Donald Peabody

Local 612
Tacoma, WA
Coy O. Presley
Dalton A. Thompson
Wilfred Volk

Local 627
Tulsa, OK
James K. Davis
Shannon C. Jones
Vaughne D. Keeling

Local 649
Peoria, IL
Don Conner
James O. Smith

Local 653
Mobile, AL
Richard E. Burgdorf

Local 701
Portland, OR
Kenneth E. Bailey
Jack B. Collins

Local 825
Little Falls, NJ
Howard P. Braddock
Fred J. Koerner

Local 826
Inactive Local
Tom Allen

Local 832
Rochester, NY
Robert Thatcher

Local 877
Norwood, MA
Francis Corrigan

Local 912
Columbia, TN
J.B. Nicholson
John W. Patterson

Local 917
Chattanooga, TN
W.S. Green

Local 965
Springfield, IL
James E. Parker

Death Benefits paid April 2007

Local 3
San Francisco, CA
Gosta M. Anderson
Eugene Collinge
Jack DeGraw
George Eastlick
Tom Farmer
Clayton Fassett
James L. Frost
Merrill McCarthy
Frank E. Smith
Charles W. Spaulding

Local 4
Boston, MA
Fred H. Locke Sr.
Delman Morgan

Local 9
Denver, CO
Emery E. Masterson

Local 12
Los Angeles, CA
Rex Coates
Santiago R. Martinez
James L. Shackelford

Local 14
New York, NY
James Shelton

Local 15
New York, NY
August V. Maino

Local 17
Buffalo, NY
Anthony Balcerzak

Local 18
Cleveland, OH
Elton W. Baker
James Boggs
Joe Campisi
Dan M. Gentile Jr.
Lowell Hartzell
Robert E. Hoover
David L. Kriso
Paul B. Milner
Burdell A. Moose
Gene T. Orem

Local 25
Brooklyn, NY
Linwood G. Howard

Local 30
New York, NY
Edward Kakos

Local 39
San Francisco, CA
Frank Miceli

Local 49
Twin Cities, MN
Robert C. Gaffney
Elden Grabau
Harris Hills

Local 57
Providence, RI
Michael Iannone

Local 66
Monroeville, PA
Harold L. Bortzer
Frank Habay
Roland L. Leibert
Chester F. Meskowski

Local 68
Newark, NJ
Mark Russo

Local 70
St. Paul, MN
Niel Borgstrom

Local 77
Washington, DC
Thomas W. Hoffman
John Thiel
Robert F. Warner

Local 94
New York City, NY
Jorge Estrada

Local 101
Kansas City, MO
Arthur F. Dame
T. M. James
Harold G. Moody

Local 103
Indianapolis, IN
Haskel T. Thompson

Local 106
Albany, NY
Robert Valliere

Local 115
Vancouver, BC
Clarence E. Fair
Clarence A. Gallinger
Melvin A. Moore

Local 132
Charleston, WV
Max H. Crawford
Edward J. Elbon
Ray Lovins
Everett Postlethwait
R. E. Summers
Arlen O. Williamson

Local 138
Hempstead, NY
Anthony Giacomelli
Barry B. Lamb
Michael Ryan
Nicholas Sackaris

Local 139
Milwaukee, WI
Thomas J. Schuetz
Harold D. Vogler
John Wald
David Wilkinson
John Wood

Local 147
Norfolk, VA
John E. Schools

Local 148
East St. Louis, IL
Paul J. Stubits

Local 150
Chicago, IL
Joseph S. Angelillo
Neil J. Anthony
Glen A. Baumgartner
Robert S. Bednarek
Raymond Delehanty
Daniel C. Frey
Jerry R. Greenlee
Max E. Joiner
Allen R. Letterer Sr.
Leo P. McGee
Robert E. Walsh Jr.

Local 302
Seattle, WA
Jerry Benzo
Frank Carter
William M. Evans
Ralph N. Paden
John F. Pierce
Walter P. Rebhuhn
Arnold Roth
Gerald V. Sitton
Hatten L. Yoder

Local 320
Florence, AL
Theodore M. Edmiston

Local 324
Detroit, MI
Albert J. Thayer

Local 351
Phillips, TX
Lowell D. Atkins
Orren R. Edson
Henry Northcutt

Local 370
Spokane, WA
Paul M. Durham
John H. Higgins

Local 406
New Orleans, LA
H. P. Clifton
C. M. Dunbar

Local 428
Phoenix, AZ
Win Conway

Local 478
Hamden, CT
Francis E. Mackbach
Hector Vigneault

Local 513
St. Louis, MO
Pius B. Jones
Donald Scaturro
Mel Wohldmann

Local 525
Inactive Local
Donald K. Diveley

Local 542
Philadelphia, PA
Samuel Maglio
Robert Schaeffer
Leo Tamanini

Local 545
Syracuse, NY
Dale McVay
Leon R. Wheeler

Local 627
Tulsa, OK
T. A. Allred
James K. Davis

Local 701
Portland, OR
Harold L. Brown
John E. Scott
Logan C. Trowbridge

Local 721
Halifax, NS
Bryce MacDonald

Local 793
Toronto, ON
H. Bostock
Patrick J. Carroll
Robert Strang

Local 825
Little Falls, NJ
Attilio R. Manglass
William C. Milens

Local 841
Terre Haute, IN
Carl Brocksmith

Local 953
Albuquerque, NM
James R. Harris
David B. Zamora

in memoriam....

Death Benefits paid May 2007

Local 1
Denver, CO
Charles Gabel

Local 2
St. Louis, MO
Floyd A. Sims

Local 3
San Francisco, CA
Albert Andrade
Wesley Ball
James D. Barnard
Adam Bickel
Teofilo V. Boncales
Art Burman
Nicholas Castillo Jr.
Robert D. Evans
Richard Fanfa
Clayton Fassett
James A. Fleig Jr.
Manuel Gomes
Earl P. Hardinger
Judd Harrison
John Hashimoto
Tom T. Higashihara
Thomas Karis
Wilfred Lafrenierre
Joe Lamping
Willis Long
Roy Mainwaring
Merrill McCarthy
Bruce McKenzie
Orville McKenzie
Alfred Medina
Yukio Miyashiro
Patrick Mosca
Samuel Napoleon
Hiroshi Oekawa
Takeo Okihiro
Joseph Rivera
Otto R. Samuel
Charles L. Sears
Lark G. Shrader
Thomas Simonsen
William F. Skinkle
Gerald Steele
Johnnie Swayze
Orville Teague
Rudolph Teily
Lester Thill
James L. Waters

Local 4
Boston, MA
Joseph Aries
Warren D. Armstrong
Robert Bonner Jr.
Joseph Ciampa
John J. Collins Jr.
William P. Doherty
John J. McDonough
Clifford Silveira

Local 7
Inactive Local
Emil Shay Jr.

Local 9
Denver, CO
Clarence L. Chadwick
James E. Clubb
Chester G. James
Robert E. Kusma
Felix Medina
Bruce Newlon
Robert E. Rhodus
Robert C. Sweetser

Local 12
Los Angeles, CA
Winford P. Bowman
Leroy Morren
Aaron R. Phillips

Local 14
New York, NY
Anthony R. Perrino
Gary F. Swartz

Local 15
New York, NY
William D. Arthur
George H. Carpenter
Charles J. Castaldo
John A. Colleluori
Emil Coppola
Anthony J. Daquila
Eugene T. Davis
Owen McPike
Antonio Paoletti
John D. Powers

Local 16
Inactive Local
George D. Myers
John E. Yates

Local 17
Buffalo, NY
Peter Frank
Alfred Fredericks Jr.
John G. King Jr.
Ralph Leamer
Michael Philbin

Local 18
Cleveland, OH
Herbert Baker
Oliver Becraft
Carl E. Cox
Elmer J. Darnell
Jerry Davenport
Glen A. Farris
Ralph M. Grant
Frank J. Oblaczynski
Gary O'Hara
Ralph D. Postlethwait
Joseph Rice
Arthur F. Roback
Charles F. Roese
Nick Sberna
William J. Schemrich
Edward G. Stagge
Mitchel Stanley
Lyle Strayer
Worthy L. Sweet
James G. Veri

Local 25
Brooklyn, NY
Kenneth Read
William F. Taylor

Local 30
New York, NY
John F. Watkins

Local 37
Baltimore, MD
Walter Whitt

Local 39
San Francisco, CA
Ralphe Forster
Robert Martin
Martin Wadewitz

Local 49
Twin Cities, MN
Henry R. Abbott
Kenneth C. Adams
Norbert H. Beuning
Dale D. Burdick
Robert J. Burroughs
James F. Butler
Alexander J. Deering
Girard Dupaul
Eugene Ekvall
Kenneth A. Finstad
Orvis J. Johnson
Henry B. Maki
Clayton P. Scheuer
Arthur H. Swanson
John E. Wallin
Roger F. Weierke

Local 57
Providence, RI
Andrew Nobrega

Local 66
Monroeville, PA
Angelo Cassanese
Kenneth J. Dale
Eugene W. Evans
Robert J. Fedders
William D. Landy
James M. Lumadue
Mike Massera Jr.
Shaffer A. McClain
John L. Miller Jr.
Charles D. Ney
William E. Otteni
George Slavik
Wilson N. Smith
Ivan C. Snyder
John E. St. Clair
James Tunney
Samuel W. Wooster

Local 68
Newark, NJ
Andrew Molitoris
Mark Russo
Alfred F. Ward

Local 71
Inactive Local
Albert J. Rudolph

Local 94
New York City, NY
Jorge Estrada

Local 98
Springfield, MA
Ralph Seavey

Local 101
Kansas City, MO
Howard M. Baker
Marion A. Fager
Jack W. Riggin
Dale G. Tedlock

Local 106
Albany, NY
John J. McGraw Jr.
Burton Wilson

Local 115
Vancouver, BC
John A. Bell
Leonard Boechler
Joseph A. Finnie
Arne P. Knudsen
Marcello Pandolfo
Tom Sidney
Anthony Tennessy
Peter Wangler

Local 123
Coffeyville, KS
Albert P. Jordan
Clifford L. Knisley

Local 132
Charleston, WV
Edward J. Elbon
Willian N. Hupp
Jack K. Ohlinger
George Walters
Ronzel Wilson

Local 137
Briarcliff Manor, NY
Orlando A. Camarco

Local 138
Hempstead, NY
Joseph Bongiorno Jr.
H. D. Bowditch
Robert M. Hill
Alexander J. Quinlan Jr.

Local 139
Milwaukee, WI
Jack D. Ball
Charles F. Birschbach
Roger L. Maguire
Eldon F. Spencer
George C. Teeters
Forrest G. Throe
Robert H. Washechek

Local 148
East St. Louis, IL
James T. Snipes

Local 150
Chicago, IL
Joseph S. Angelillo
Philip R. Baker
Donald Brown
Charles E. Decker
William R. Dilts
Lester K. Doogan
Glen T. Erickson
Edward L. Hattendorf
Gary R. Hedger
Wiley M. Jenkins
Max E. Joiner
Donald J. Lee
Francis Michael Jr.
Wm C. Mynaugh
Robert W. Parker
Lester Rakittke
Robert E. Reese
Peter Reviglio
Leory Rushing
William J. Ryan Jr.
Dominic A. Sabatino
Roger D. Simon
James C. Terpstra
Roy Vlink
Walter C. Wendt
Robert S. Weygandt
Robert C. Whitcomb
Travis C. Wilson

Local 181
Henderson, KY
Austin D. Bradley
Ernest H. Brown
Carl R. Huff
Charles L. Kinser
William O. Lands

Local 216
Baton Rouge, LA
John B. Engels

Local 234
Des Moines, IA
Jack Briggle
Robert Kelso
James L. Morehead Sr.

Local 260
Inactive Local
Otto Zimmerman

Local 302
Seattle, WA
Eric P. Anderson
Ray C. Dinsmore
William M. Evans
Leiter Hockett
Gordon Leitch
John E. Mailloux
Thomas L. Richard
Charles A. Simmons
R. L. Sutton

Local 305
Superior, WI
Odin E. Jossund

Local 310
Green Bay, WI
John Vraney

Local 317
Milwaukee, WI
Tony Maio
Arnold R. Norris

Local 318
Marion, IL
Bill D. Cusic
Johny Herring Jr.
Russell D. Pritchett
Raymond Welch

Local 320
Florence, AL
James W. Shepard
Ottis H. Smith

Local 324
Detroit, MI
Raymond Cossairt
Richard L. Goff
Paul G. Hart
Robert E. Hess
Robert L. Jaramillo
Donald R. Kasbohm
William Labuhn
Edwin J. MacDonald
Thomas D. McGurn
John H. Murelli
Julius S. Nagy
John Okroy
Loyce Seegraves
James R. Serena
Byron J. Tefft

Local 326
Inactive Local
James Roush

Local 351
Phillips, TX
J. Chapman
L. R. Huval
Bob Sanders

Local 370
Spokane, WA
Ernest E. Hastings

Local 381
El Dorado, AR
W. W. Sewell

Local 382
Inactive Local
Delbert P. Bond
Forrest Williams
Roscoe P. Williams

Local 399
Chicago, IL
Gary E. Marlow
Robert J. Scott
Edgar J. Wyland

Local 400
Helena, MT
Chester E. Langowski
John L. Mann
Edgar Reiner

Local 406
New Orleans, LA
Herman Dutzy
Gilbert C. Simpson
Walter E. Williams

Local 407
Lake Charles, LA
Hollis Eubanks
Oliver Morrison

Local 409
Buffalo, NY
Joseph Canazzi

Local 410
Inactive Local
Paul A. Erat

Local 415
Plymouth, NC
J. P. Turner

Local 428
Phoenix, AZ
P. D. Cain
George E. Dalton
Franklin D. Edmonson
Jake Fech
Donald A. Hazen
Heber L. Nelson
F. G. Ray
Marcus W. Sigman

Local 450
Houston, TX
Raymond Anderson

Local 463
Niagara Falls, NY
Donald Hollenbeck
John E. Ketch
Joseph Maziarz

Local 474
Savannah, GA
R. L. McVey

Local 478
Hamden, CT
Virgil M. Wagar

Local 501
Los Angeles, CA
Samuel J. Phillips
Edgar Swabeck

Local 510
Inactive Local
T. V. Tattersal

Local 513
St. Louis, MO
Clyde H. Curtis
Robert L. Lubker
Sylvester Pound
Fred Proffitte
Zeno J. Stawizynski
Ralph H. Stubinger
Clarence E. Swarthout

Local 520
Mitchell, IL
Kenneth P. Belcher

Local 525
Inactive Local
William W. Hedger
Lewis Jenkins

Local 542
Philadelphia, PA
Jerome Julian
Clifton Killinger
James M. Labenz
Joseph A. Letko
Robert Manley Jr.
Joseph A. Marmer
John S. Mele
Robert E. Millar
Leo Tamanini
Harold K. Wentzel
Robert Whitfield
Willie L. Wilson

Local 545
Syracuse, NY
Grant L. Caldwell
Nelson S. Haynes

Local 564
Freeport, TX
J. T. Bounds

Local 587
Inactive Local
Robert F. Ziegler

Local 589
Inactive Local
Elwood G. Edgar
John J. McClain

Local 609
Seattle, WA
Leota E. Hall

Local 612
Tacoma, WA
George R. Sizer
Dale D. Wilson

Local 627
Tulsa, OK
Clyde F. Beaver
James K. Davis
Lee James

Local 649
Peoria, IL
David Hoerr Jr.
Henry Hoffmann

Local 701
Portland, OR
Gordon D. Allard
Clyde C. Austin
John W. Carson Sr.
Myron C. Clemons
Sterling B. Doege
Orville L. Dunigan
Thomas C. Roberts
Carlos G. Scott

Local 793
Toronto, ON
Russell Halliday

Local 824
Inactive Local
Werner Fullenkamp

Local 825
Little Falls, NJ
Thomas Clark
Carl Lontka
William A. Rudolph

Local 826
Inactive Local
J. F. Gibson

Local 841
Terre Haute, IN
Marion E. Clem
Ralph M. Curtis
Fred B. Flesher
Leon Parlett

Local 912
Columbia, TN
Thomas A. Skelley

Local 925
Tampa, FL
Void A. Nix Sr.
John C. Straight
Joe H. Zorn

Local 950
Milwaukee, WI
Bernard J. Devorse

Local 955
Edmonton, AB
Keith L. Barsness
Joseph Pobihushchy
Robert T. Smith
George Zukowsky

Local 965
Springfield, IL
Joseph E. Cundiff
Virgil B. Pearson

Key ingredient to quality training: SKILLED INSTRUCTORS

POINT of View

by Dr. Susan Schurman

The apprenticeship approach to teaching new members how to master a craft or occupation is one of the oldest forms of instruction and has proven, over time, to be the most effective. The reason is because of the basic soundness of the underlying educational principles on which it is based and because it is readily adaptable to new techniques and technologies.

The core of the model has not changed in millennia: skilled members of the craft teach new members by working with them, side by side. This means that expert and apprentice jointly perform the work with the expert initially performing the more difficult tasks and the apprentice performing the easier tasks. Gradually the expert hands over more and more of the tasks to the novice and provides feedback to help him or her acquire the proficiency needed to become a "journeyman" worker in the occupational community.

The critical ingredient in this approach is the skills of the instructor – not just the technical skills in the craft, but also the ability to communicate those skills to the novice and supervise his/her performance till it reaches proficiency.

Over the past century, the various crafts involved in the building and construction industry have made dramatic improvements in apprentice instruction. One major improvement was the creation of the 'registered" apprenticeship in which employers, workers and unions agreed to abide by a strict set of guidelines supervised by either the federal or state government. Registered apprenticeships ensure that apprentices will receive quality instruction and involve performance assessments intended to insure that those who complete apprenticeships have acquired the necessary knowledge and mastered the requisite skills.

A second important innovation has been the introduction of formal classroom training for apprentices in a series of core academic subjects (e.g. mathematics, geometry, soil science, plans and grading and so forth depending on the occupation) to supplement the traditional on-the-job training by journey level workers. In most construction apprenticeships today, the academic core of the training is offered at a level that is equivalent to instruction at a comparable two-year community college. This means that apprenticeship learning is now a part of the formal higher education system. More and more construction unions have taken the step to have their apprenticeships assessed for their college credit equivalence.

This is a major step forward for both apprenticeship learning, as well as for the U.S. post-secondary education system. It means that when a young man or woman chooses to enter a trade they are no longer making a choice not to go to college. Rather, they are choosing to "earn while they learn," acquiring both a highly technical occupational skill as well as college credit. This option will be of utmost importance as the construction unions compete with colleges and universities for outstanding young people to enter the craft. The industry is only going to get more complex over the coming decades and the demand for a work force with good general education and technical skills will continue to grow.

This leads to a third important innovation in apprenticeship learning: instructor training programs that ensure those teaching the core apprentice curriculum are highly qualified in both the technical aspects of the craft, as well as in modern, effective teaching methods. If apprenticeship is to be a vital part of our nation's post-secondary education system, attracting high ability young people, then those who serve as apprenticeship instructors and coordinators must also have the kind of education and training appropriate to two-year college instructors.

Fortunately, many of our unions have stepped up to this task, creating outstanding instructor training programs and linking these to degree programs at a variety of community colleges and to a Bachelor's Degree program at the National Labor College and other four-year colleges.

Raising the qualifications of apprenticeship instructors will insure that one of our nation's most important sources of post-secondary education is prepared to play its role in the 21st century economy.

(EDITOR'S NOTE: Dr. Susan Schurman, who served as the president of the National Labor College in Silver Spring, MD from 1997 until her departure in mid-June this year to take a position at Rutgers University, is a nationally recognized teacher and administrator in the field of labor studies.

Under her leadership, the Labor College gained the status of an independent, accredited institution of higher learning.

Prior to taking over the NLC position, Dr. Schurman was director of the Labor Studies Center at the University of Michigan. She also served as the director of the Labor Extension Program at Rutgers.

Not only is Dr. Schurman an outstanding union educator, she also is a veteran union activist. She served as a shop steward with AFSCME and as a local union president with the Transport Workers Union –and she still proudly carries her union card.

Emmett Russell
Director
Department of Safety and Health
International Union of Operating Engineers

A 35-year veteran of the construction industry and member of the International Union of Operating Engineers, Emmett Russell plied his craft on a variety of construction projects in the Washington, D.C. metropolitan area.

Emmett Russell began his career in the construction industry in 1970, as a laborer and night field safety coordinator, on the first major construction project on the Washington, DC Metro System, Judiciary Square. His responsibilities included traffic and pedestrian safety in construction work areas.

In 1971, Mr. Russell was accepted in the International Union of Operating Engineers, Local 77 Apprenticeship program. He received classroom and field training on heavy construction equipment and job site safety. He graduated from the apprenticeship program in 1975.

From 1971 to 1978 Mr. Russell worked on various construction projects in the Washington, D.C. metro area. His construction experience centered mainly on above- and below-ground rail construction, including hard rock under-ground tunneling with blasting and tunnel-mining machines, open-cut excavation and tunnel construction, and sunken-tube tunnel construction, which required work on and around water. Mr. Russell advanced from an apprentice to a position as a mechanic, lead tunnel mechanic, then master mechanic. His job duties as a master mechanic included supervising over 30 apprentices, equipment operators and mechanics. It also included the maintenance, repair and safety of on site heavy equipment. Mr. Russell also had the responsibilities of managing the mechanics shop.

From 1978 through 1981, Mr. Russell worked on the staff of the International Union of Operating Engineers, Local 77 as an Organizer and Business Representative. His activities included organizing and representing workers in the paving industry in a variety of areas including safety and health. He also interacted with members and contractors performing sand and gravel mining.

From 1981 through 2002 Mr. Russell has worked for the International Union of Operating Engineers as an International Representative and General Organizer, in Maryland, Virginia, West Virginia, North Carolina, South Carolina and in the City of Washington, DC. His duties included; organizing, negotiations, grievance handling, membership and local union staff education and training in a variety of areas.

Mr. Russell has studied at Howard University, Washington, DC and the George Meany Center for Labor Studies, Silver Springs, Maryland. He completed the Trade Union Program at Harvard University, Cambridge, MA.

In February 2002, Mr. Russell was appointed as Director, of the Department of Safety and Health, for the International Union of Operating Engineers. His duties include a broad spectrum of safety and health subjects, including regulatory affairs, legislation, training, and consultation services to over one hundred IUOE Local unions.

In addition to his duties with the IUOE, he has served on or is currently serving on the following construction industry and/or safety and health related committees:

- The ACCSH Crane & Derrick (Subpart N) work group
- The ACCSH ROPS on Compactors work group
- OSHA's Advisory Committee on Construction Safety and Health's (ACCSH)
- A number of ACCSH Work Groups
- The AFL-CIO Safety and Health Committee
- ANSI A10 Committee
- The Roadway Safety Consortium Training Program, under an OSHA grant
- The Roadway Work Zone Safety and Health Coalition, OSHA Alliance
- Asphalt Engineering Controls work group
- NIOSH Crane Proximity Warning Alarm Research Committee
- The Mine Safety and Health Research Advisory Committee
- The OSHA Crane & Derrick Negotiated Rulemaking Advisory Committee
- The OSHA Drug-free Workplace Alliance
- The ACCSH Roll-over Protective Structures work group
- The ACCSH Excavation/Trenching work group
- Silicia/Milling Machine Partnership in conjunction with the National Asphalt Paving Association and NIOSH
- Federal Highway Administration "WORK ZONE SAFETY GRANTS PROGRAM" Committee
- NIOSH/NORA Construction Sector Council Workgroup

Barbara McCabe
Program Manager
National Training Fund/National HAZMAT Program
International Union of Operating Engineers

Positions and Employment

1999-Present Program Manager, IUOE National Training Fund – National HAZMAT Program, Beaver, WV

Program Administrator/Principal Investigator for multi-million dollar cooperative agreements and grants for National Institute for Environmental Health Sciences (NIEHS) Worker Education Training Program, Energy Security and Reliability and OSHA Susan Harwood Disaster Response and Recovery. Manages programs, training, and support personnel. Program Administrator/Principal Investigator for multi-million dollar cooperative agreement completed in 2002, to conduct Human Factors Assessments of emerging environmental restoration, decontamination, and decommissioning technologies. Identifies and develops new areas for training and oversees the administrative functions associated with grant applications, proposal submittals, budget, program reporting, contractor oversight, et cetera. Responsible for all cooperative agreement and grant reports and deliverables. Responsible for budget development and oversight for all programs and facility operation. Consults with staff and local unions on technical safety and health issues.

1995-1999 Industrial Hygienist, IUOE National HAZMAT Program, Beaver, WV
Developed and implemented protocols for human factors assessments and mitigation strategies for health and safety concerns. Managed all hazard analysis to be conducted during the human factors assessment of emerging environmental restoration, decontamination, and decommissioning technologies, including conducting field assessments and development of Technology Safety Data Sheets (TSDA). Provided consultation services on safety and health issues for construction (heavy equipment operators) and stationary (building engineers) local unions.

1991-1995 Industrial Hygienist, EG&G-TSWV, Inc., Morgantown, WV
Developed and managed comprehensive industrial hygiene program and SARA Title III Community Right to Know Program. Industrial Hygiene oversight on construction jobs and clean coal research projects, including air sampling, noise monitoring, recommendations for PPE, and resolution of training issues. Coordinator for the Emergency Medical Response of the DOE FETC site Emergency Response Team. Conducted site monitoring programs for noise, air contaminants, heat stress, respiratory protection program, ergonomic evaluations, etc. Developed, and trained site employees in all aspects of safety and health.

1985-1991 Systems Analyst, EG&G-TSWV, Inc., Morgantown, WV
Managed the medical database, medical emergency services, Hearing Conservation, and Employee CPR Program. Conducted all hearing conservation and CPR/first aid training for on-site personnel.

1982-1987 Industrial Audiologist (consultant), Monongalia General Hospital, Morgantown, WV

Provided contract services for audiometric testing for hearing conservation program for Maintenance Department employees.

1982-1984 Clinical Audiologist, Morgantown ENT Clinic, Inc., Morgantown, WV
Conducted all clinical audiometric testing, lesion site testing, and ENG. Supervised Audiology Graduate Students from West Virginia University

1980-1982 Clinical Audiologist, Charles E. Haislip, M.E., Fairmont, WV
Conducted all clinical audiometric testing, lesion site testing, and Electronstagmography (ENG). Supervised Audiology Graduate Students from West Virginia University

EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
West Virginia University, Morgantown, WV	Bachelors of Science	1973-1977	Speech Pathology/Audiology
West Virginia University, Morgantown, WV	Masters of Science	1977-1979	Audiology
West Virginia University, Morgantown, WV	Masters of Science	1990-1995	Occupational Health and Safety Engineering

Other Experiences and Professional Memberships

1975 to present	Member American Speech-Language-Hearing Association
1979 to present	Certification of Clinical Competence in Audiology
1996 to present	Hazardous Waste Operations and Emergency Response Trainer
1997 to 2006	Member American Industrial Hygiene Association
2002 to 2004	Member of OSHA National Ergonomics Advisory Board (Board was established for two years only)
2007 to present	Member of OSHA National Advisory Committee on Occupational Safety and Health (2 year appointment)

Peer Reviewed Publications

B McCabe and B Lippy, "Long-Term Stewardship of the DOE Workforce: Integrating Safety and Health into the Design and Development of DOE Clean-up Technologies", *Environmental Science and Pollution Research*, Special Issue 1 (2001), pp 62-67, 2001. Internet address: www.scientificjournals.com/webeditions/espr.

B McCabe**, "**Technology Safety Data Sheets: A Tool to Protect Workers from the Hazards of Environmental Clean-up Technologies", TIE Quarterly, Vol. 9, Winter 2001.

IUOE National Training Fund
National HAZMAT Program

The IUOE National Training Fund National HAZMAT Program is a recipient of Federal cooperative agreements and grants to provide HAZWOPER and OSHA Train-the-Trainer classes to allow each Local Union the ability to train and certify its members. This peer-training method gives IUOE members a more competitive advantage in the workplace and provides the training they need to perform their jobs in a safe manner.

In addition to the Train-the-Trainer classes conducted at the Training Center in West Virginia, the IUOE National Training Fund National HAZMAT Program can provide your Local with the following services:

Direct training for your members that can be conducted at the local or at an employer's site where your members work	**Technical safety and health, emergency/disaster response, and energy security and restoration assistance**
Training data information from our National Training Database for your members who have had training in the past	**Information on HAZWOPER, OSHA, emergency/disaster response, and other safety and health classes being held at other locals throughout the country**
Expertise to provide best practices and information sharing, develop scenarios and conduct exercises to prepare all stakeholders to protect and restore energy infrastructure should an event, terrorist or natural, occur	**Training materials, including personal protective equipment, as well as a number of other types of equipment for your HAZWOPER and other safety and health classes**
Information on safety and health regulations and standards	**New instructor mentoring for HAZWOPER and other safety and health classes**

A current curriculum and training materials catalog can be ordered that provides a list of all of the classes and training materials available through the IUOE National Training Fund National HAZMAT Program.

Questions regarding the services the IUOE National Training Fund National HAZMAT Program has to offer can be directed to Barbara McCabe at 1293 Airport Road, Beaver, WV 25813, or called in at (304) 253-8674, faxed to (304) 253-7758, or emailed to hazmat@iuoeiettc.org. Forms requesting classes and materials can also be submitted via the Internet at

IUOE National Training Fund
National HAZMAT Program

Strategy for DOE Training

The train-the-trainer approach, training peers to become instructors, is the foundation for IUOE training. Utilizing peer instructors from local unions and local union training programs greatly expands the efforts of the IUOE. Peer instructors return to their locals and DOE sites armed with an understanding of hazardous waste work, a new understanding of principles of occupational health and safety and of OSHA requirements, and applicable course materials that enable them to begin teaching immediately.

The cadre of certified peer instructors that have completed the IUOE HAZWOPER Train-the-Trainer, OSHA 500 Construction Industry Trainer, and OSHA 501 General Industry Trainer courses have trained the target populations. Worker-peer training results in a much higher acceptance of the instructor by the students with an added increase in the credibility of the message, which is essential

for training aimed towards safety and health to prevent injuries and illnesses.

The DOE instructors receive the OSHA 500 Construction and/or the OSHA 501 General Industry Safety Train-the-Trainer courses. This additional training enables each instructor to include OSHA Safety Standards within the HAZWOPER training and provide Construction or General Industry Outreach programs. This training follows DOE policy, which identifies both the OSHA Safety Standards, 29 CFR 1910 General Industry, and 29 CFR 1926 Construction Industry, as mandatory Environmental Safety and Health (ES&H) standards for DOE sites. In addition, some DOE Instructors receive and conduct Disaster Site Worker (DSW) and Critical Incident Stress Management (CISM) training to assure preparedness for dealing with the increasing threat of disasters, natural or man-made.

In addition to qualified Master Instructors, IUOE has a staff of professional subject matter experts that not only train participants, but also are a resource to support technical research to assist the target populations. These professionals develop training modules in new areas to support the training programs that train other trainers.

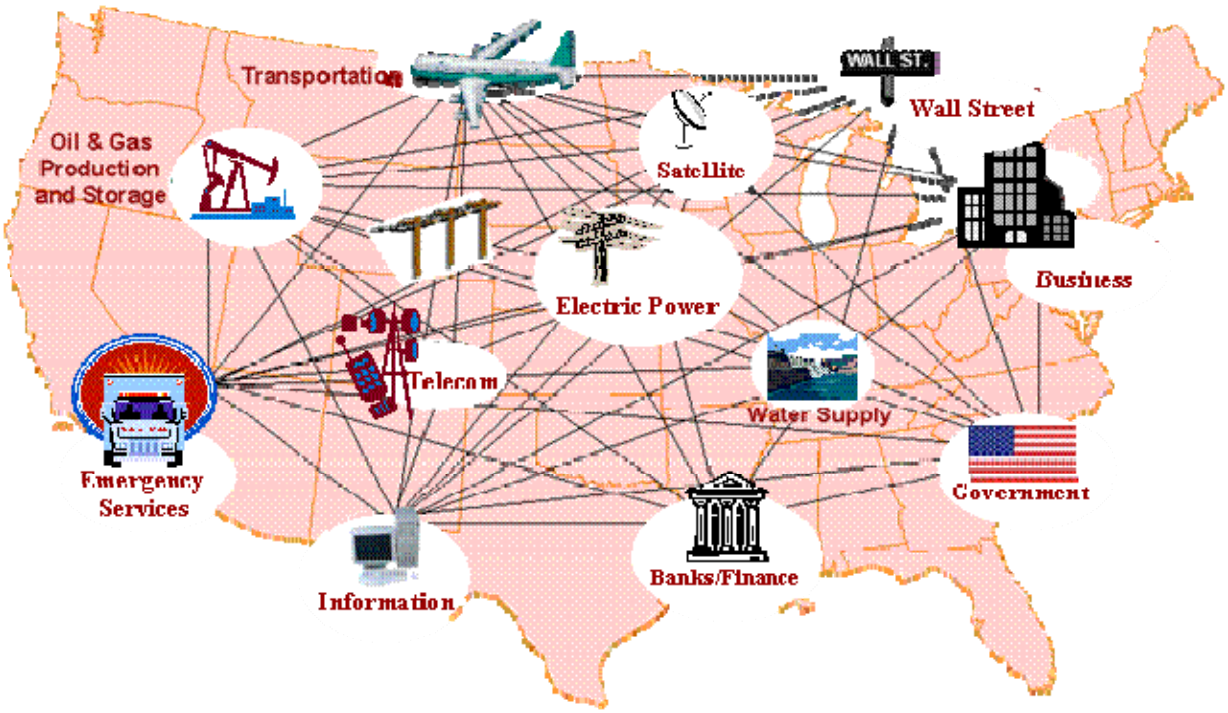
The IUOE training program recognizes the wealth of knowledge possessed by today's DOE worker. The combined classroom knowledge exceeds that which any individual instructor could possess. Therefore, active student participation is essential to create the most effective learning atmosphere. Student participation is encouraged and achieved through expanded introductions (where students describe their job requirements and the health and safety challenges of their position), creating a relaxed atmosphere where interjection is invited, and utilization of group discussions and activities.

IUOE National Training Fund
National HAZMAT Program

Energy Security and Restoration Exercise Program / Best Practices and Information Sharing

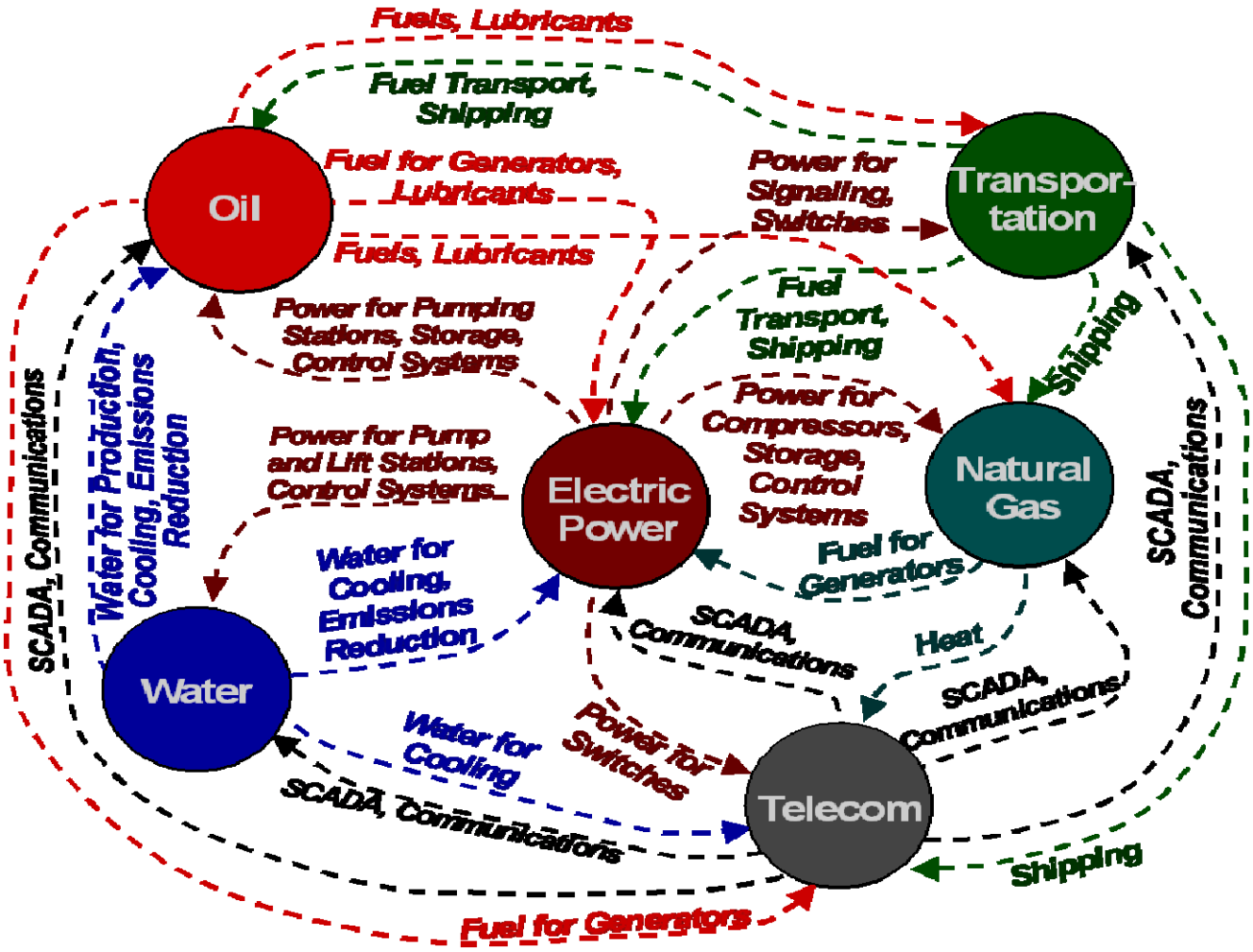
Objective

The overall objective of the project is to provide expertise in the development of scenarios and conduct of exercises to augment the Department of Energy (DOE) National Energy and Technology Laboratory (NETL) and DOE Office of Electricity Delivery and Energy Reliability, Infrastructure Security and Energy Restoration Division in providing all stakeholders with best practices and information sharing to protect energy and energy infrastructure and restore energy should an event, terrorist or natural, occur. Best practices and information sharing will be provided to conduct exercises ranging in size and complexity from table top to national level.



Mission Statement

The mission of the IUOE National Training Fund National HAZMAT Program is to provide expertise to provide best practices, information sharing, and develop scenarios and conduct exercises ranging in size and complexity from table top to national level to prepare all stakeholders to protect and restore energy infrastructure should an event, terrorist or natural, occur.



2005 Deliverables

During 2005, the IUOE National Training Fund (NTF) National Hazmat Program produced five deliverables under the Energy Security and Restoration Exercise Program / Best Practices and Information Sharing. Each deliverable is designed to comply with the overall objective of the program and more specifically enable the IUOE National Hazmat Program to accomplish its mission. The five deliverables are:

- IUOE NTF National HAZMAT Program Energy Security and Energy Infrastructure Disruption Scenarios
- IUOE NTF National HAZMAT Program Information Session and Training Report
- IUOE NTF National HAZMAT Program Energy Load Management Best Practices Lessons Learned
- IUOE NTF National HAZMAT Program Educational Program on Distributed Generation
- IUOE NTF National HAZMAT Program Smart Card Pilot Project 2005 Update

Information Sharing

The IUOE NTF National HAZMAT Program has evolved under the Energy Security and Restoration Program from a strictly training mission to the present mission that involves information sessions and table top exercises. The IUOE NTF National HAZMAT Program continues to offer information sessions to augment its Energy Infrastructure and Disruption Scenarios. The information modules continue to be updated based on the most current standards, laws, and events. The IUOE NTF National HAZMAT Program also continues to develop specialized information modules for unique situations such as the Distributed Generation information module. The information sessions currently offered are:

- Terrorism Awareness
- Personal Protective Equipment
- Respiratory Protection
- Decontamination
- Monitoring
- Communications
- Critical Incident Stress Management
- Risk/Vulnerability Assessments
- Applicability of HAZWOPER
- Biological Weapons
- Chemical Weapons
- Explosives and Incendiary Devices
- Incident Command/Unified Command
- Physical Security HVAC I
- Radiological Terrorism
- HVAC II – Heating, Ventilation, and Air Conditioning
- Energy Infrastructure and Interdependencies
- Natural Disasters
- Distributed Generation

OSHA DISASTER RESPONSE AND RECOVERY

NEW - Avian Influenza

4-Hour Disaster Site Orientation

AS-100 Asbestos Awareness

CS-300 Confined Space

CSO-200 10-Hour Construction

HZ-200 HAZWOPER 8-Hour Refresher

HZ-300 HAZWOPER 40-Hour

LD-100 Lead Awareness

Mold Awareness

Pandemic and Avian Influenza

Dirty Bombs- RDDs

October 2007 San Diego, CA wildfires

IUOE

Training is our Future!

As an integral part of its commitment to provide highly skilled heavy equipment operators and stationary/facilities engineers to the construction, stationary and environmental industries, the International Union of Operating Engineers developed and implemented comprehensive training programs that are widely recognized as the best in those industries.

IUOE local unions throughout the U. S. and Canada, with extensive support and input from the International Union, administer the training programs.

Additionally, the IUOE has cooperative working agreements with the U. S. Department of Energy to administer and operate the nation's foremost hazardous materials (HAZMAT) training program and the International Environmental Technology and Training Center, both located at the IUOE National Hazmat Project in Beckley, WV.

The IUOE also participates in the Job Corps program, a training program for young people, age 16 - 24. The IUOE has training agreements with the U.S. Departments of Labor and Agriculture to administer and operate pre-apprenticeship training programs at various Job Corps training centers throughout the U.S.

Operating Engineers Apprenticeship & Training

High quality skill development training for IUOE members is provided by nearly 70 apprenticeship and training programs at IUOE local unions throughout the U.S and Canada. These programs, usually registered with a federal, state or provincial apprenticeship agency, are jointly sponsored by the IUOE local unions and the employers for whom the locals supply labor.

Apprenticeship is an excellent way to learn a craft and to earn an income at the same time. The system is designed to give someone who knows little or nothing about the trade the knowledge to become a master. The average length of an Operating Engineer apprenticeship is three to four years. During this period, apprentices learn their trade by 1) working with skilled journeymen on actual job sites, and 2) attending related classroom instruction and/or field training at the local union.

Field training can take place on or off the local union's site. Volunteer service projects such as building a neighborhood baseball diamond enhance the community while giving apprentices useful practice for working on a real job. Starting pay for an apprentice is about 40% to 60% of the journey-level rate. Pay increases are scheduled at designated times during the progression of the apprentices to journeymen.

After completing apprenticeship and achieving journey-level status, members are encouraged to take advantage of advanced training classes the IUOE offers. This will enable members to stay on top of technological advances in construction equipment and other issues related to the industries in which employed. To be the best, members should continually strive to build and improve their skills. By constantly expanding their skills and enhancing their versatility, members substantially increase their opportunities to get good jobs--and keep them.

IUOE

About Job Corps

Job Corps is the nation's largest and most comprehensive residential, education and job training program for at-risk youth, ages 16 through 24. Since its inauguration in 1964, under the Economic Opportunity Act, Job Corps has provided more than 2 million disadvantaged young people with the integrated academic, vocational, and social skills training they need to gain independence and get quality, long-term jobs or further their education.

Today, Job Corps continues to serve nearly 70,000 students a year at 118 Job Corps centers throughout the country. Operating within the Career Development Services System (CDSS), Job Corps training is composed of five stages: Outreach and Admissions (OA), Career Preparation Period (CPP), Career Development Period (CDP), Career Transition Period (CTP), and Career. The fundamental goal of the process is to help students achieve their career objective. For more information about CDSS, visit our website at "www.jccdrc.org". Job Corps is a public-private partnership, administered by the U. S. Department of Labor (DOL), Employment &Training Administration's (ETA), Office of Youth Services (OYS). If you're looking for an opportunity, Job Corps is looking for you!

The International Union of Operating Engineers (IUOE) has proudly participated in the Job Corps Training Program for the past 36 years. Thousands of economically disadvantaged young adults have benefited from the IUOE Job Corps Training Program and have continued their success by becoming productive operating engineers, apprenticeship and training instructors, local union business agents and contractors.

Presently, the IUOE contracts with the US Departments of Labor and Agriculture to provide craft training at 13 Job Corps Centers. Thirty operating engineer instructors, who are all IUOE Local members, annually train 450 young adults in heavy equipment operation, heavy equipment maintenance and repair, surveying, stationary engineering, and basic and advanced asphalt paving. The IUOE Job Corps Training Program is a pre-apprenticeship program, and depending on the student, training typically lasts one year. Instruction consists of classroom, hands-on equipment training and community service projects as well as social skills training designed to enhance the employability of each young adult. Upon completion of training, students are referred to local unions for apprenticeship or directly to jobs.

In addition to the benefits the youth receive through craft training, the local communities continue to reap the rewards of the IUOE Job Corps Training Program. Each of the IUOE Job Corps Training Programs is involved in projects which save the government and non-profit organizations thousands of dollars annually. Some of the many organizations the IUOE Job

Corps Training Program has done community service work for are: Tennessee State Park System, Sullivan County Sheriff's Office, Habitat for Humanity, Albany Parks and Recreation, City of Beaumont, City of Moreno Valley, City of Sacramento Police Department, Yakima Humane Society, Indian Creek High School, Duck Creek Township, City of Puxico, City of Altus, and the College of Ozarks. These projects have included work such as paving, grade work, building athletic fields, slope staking, finish grade stakes and storm drain stakes. In addition, the students do work on many Job Corps centers around the country, saving the federal government thousands of dollars.

IUOE Job Corps Training Program continues to provide some of the highest starting wages to its graduates. The success is due to the hard work of the staff, instructors, graduates and the cooperation of the IUOE Locals and their training programs. In addition to the twenty-nine instructors, the IUOE Job Corps Training Program staff consists of 12 coordinators and administrative personnel who are all Local IUOE Union members.

A new Job Corps Training Program, located in New Haven, Connecticut, began training students in Stationary Engineering in Spring 2003. Local 3 is the newest partner in this opportunity to offer training to disadvantaged youth.

Perhaps the most significant achievement of the IUOE Job Corps Training Program in recent times has been its preservation in an era of governmental budget reductions following the events of 9/11.

Based on its previous success, Job Corps has received bipartisan support and continues to receive adequate funding to continue operations. In September 2002, IUOE Job Corps signed a one-year contract with four additional option years for its Department of Agriculture Training Centers. The IUOE Job Corps retained "Sole Source" status for this contract. There is one option year left with the Department of Labor contract, expected to be renewed next year.

The IUOE and Job Corps have maintained its successful partnership for the past 36 years. The partnership continues due to the mutual benefit derived by the economically disadvantaged youth, who are provided a bright career path through craft training and continuing support, and the IUOE, which is provided a steady source of good members.

Home Builders Institute

International Masonry Institute

International Union of Operating Engineers

International Union of Painters and Allied Trades

Operative Plasterers' and Cement Masons'

Transportation • Communications Union

United Brotherhood of Carpenters

UAW Labor Employment and Training

NTC Program Information

International Union of Operating Engineers

The International Union of Operating Engineers (IUOE) has proudly participated in the Job Corps Training Program for the past 36 years. Thousands of economically disadvantaged young adults have benefited from the IUOE Job Corps Training Program and have continued their success by becoming productive operating engineers, apprenticeship and training instructors, local union business agents and contractors.

Presently, the IUOE contracts with the U.S. Departments of Labor and Agriculture to provide craft training at 13 Job Corps Centers, including a new Stationary Engineering Program at New Haven, Connecticut. The IUOE has 21 programs and 33 operating engineer instructors, who are all IUOE Local members. The IUOE annually trains up to 470 young adults in heavy equipment operation, heavy equipment maintenance and repair, surveying, stationary engineering, and basic and advanced asphalt paving. The IUOE Job Corps Program is a pre-apprenticeship program and, depending on the student, training typically lasts one year. Instruction consists of classroom, hands-on equipment training and community service projects as well as social skills training designed to enhance the employability of each young adult.

Basic Asphalt Paving includes basic training in the operation of dirt and asphalt construction equipment and all associated safety procedures. Projects include hands-on efforts in communities.

Advanced Asphalt Paving - students with basic skills in the operation of heavy equipment and/or basic paving learn to master the more intricate operations taught at the advanced level. Students do paving work at across the country.

Heavy Equipment Mechanic - students can gain a variety of skills including engine and transmission repair, welding and cutting, working with electrical and hydraulic systems, lubrication and equipment maintenance, pump and compressor repair, safety and deciphering equipment manuals.

Heavy Equipment Operation - students learn to operate up to seven different types of construction equipment, including bulldozers, front-end loaders, backhoes, graders, scrapers, rollers and forklifts. Training also includes basic grade setting and checking. Some

students are eligible to receive their CDL license.

Surveyor - students learn the various types of surveys, survey terminology, how to care for survey equipment and how to organize a survey crew. Other skills students learn are identifying and driving stakes, setting of witness stakes, using hand and arm signals, and pacing.

Stationary Engineering - Students are instructed in a number of areas of expertise in the HVAC field including safety, using hand and power tools, the maintenance and operation of refrigeration and heating units along with safe handling, storage, recovery, reclaiming and recycling of refrigerants. Students learn the basics of electrical maintenance, plumbing, fire suppression in commercial buildings and as well as preventative maintenance procedures.

For more information, see their web site: http://www.iuoe.org/training/job_corps.asp

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AFL-CIO

Metal Trades Department

The Metal Trades Department: What We Do

The Metal Trades Department functions through local Metal Trades Councils, which are self governing, delegate bodies chartered by the MTD at the request of three or more affiliated unions. Each affiliated Local is entitled to up to six delegates. Each council's voting strength is proportionate to its per capita membership. Metal Trades Councils coordinate organizing and collective bargaining in particular plants, establishments or localities.

MTD Local Councils are responsible for negotiating and administering their agreements and processing of grievances that arise. A Metal Trades Council designates committees called for in any agreement; drafts proposals for negotiating agreements and generally makes the bargaining agreement work through its Council officers, representatives, stewards and chief stewards.

Local Councils meet at least once a month. They are financed by a monthly per capita tax paid by each of their affiliated local unions based on the number of members they represent through the local Metal Trades Council.

Metal Trades Councils speak for the majority of production and maintenance workers in atomic energy plants. They represent thousands of workers in the non-ferrous mining industry, in the petro-chemical industry, and in the shipbuilding and ship repair industry on all coasts and in a variety of other industrial plants.

Metal Trades Councils hold collective bargaining rights and signed agreements for the workers of all crafts and trades in all U.S. Navy Shipyards. They hold bargaining rights for workers in a variety of other federal installations operated by the Bureau of Standards, the National Institutes of Health, the U.S. Coast Guard and the Army.

What are the Metal Trades Department District Councils?

The MTD has chartered Metal Trades District Councils for both the Pacific and Atlantic Coasts.

The Pacific Coast Metal Trades District Council is composed of local Metal Trades Councils and their affiliated local unions operating along the entire Pacific Coast, with membership employed in shipbuilding and repair. It holds a master collective bargaining agreement covering the shipbuilding and repair industry on the Pacific Coast.

The District Council holds biennial conventions through which it charts its course for the ensuing years.

The East Coast District Metal Trades Council and the Federal Employees West Coast District Metal Trades Council are composed of local Metal Trades Councils and their affiliated local unions representing employees in the various Navy, Army and other federal installations on the East and West Coasts. They serve as a coordinating aid for these councils and their affiliated

unions in their relations with the various federal agencies and in promoting their legislative goals. The East Coast District Council holds annual conventions, while the West Coast District Council holds biennial conventions.

The MTD's strength is reflected not only through its councils but in the combined strength of the 20 International Unions which compose it. These unions have a total membership of over 5 million members. The strength of their combined staffs and their facilities can be called into play in connection with MTD organizing drives and to assist Metal Trades Councils in collective bargaining and organizing activities. Legislative staffs of affiliated international unions along with the AFL-CIO Legislative Department assist the MTD in promoting and supporting legislation beneficial to the workers MTD represents and in opposing harmful measures.

Metal Trades Department International Affiliates [Last Updated 7/23/07]

American Federation of Labor and Congress of Industrial Organizations, AFL-CIO
815 16th St., NW, Washington, DC 20006
Phone: 202-637-5000 Fax: 202-637-5058
John J. Sweeney, President
Linda Chavez-Thompson, Executive Vice President
Richard Trumpka, Secretary-Treasurer

International Association of Heat and Frost Insulators and Asbestos Workers
9602 Martin Luther King Highway, Lanham, MD 20706
Phone: 301-731-9101 Fax: 301-731-5058
James A. Grogan, President
James P. McCourt, Secretary-Treasurer

International Brotherhood of Boilermakers, Iron Shipbuilders, Blacksmiths, Forgers and Helpers
753 State Ave., Suite 565, Kansas City, KA 66101
Phone: 913-371-2640 Fax: 913-281-8101
Newton Jones, President
Jerry Wilburn, Secretary-Treasurer

International Brotherhood of Electrical Workers
900 7th St., NW, Washington, DC 20001
Phone: 202-833-7000 Fax: 202-467-6316
Edwin Hill, President
Jeremiah J. O'Conner, Secretary-Treasurer

United Food and Commercial Workers International Union
1775 K St., NW Washington, DC 20006
Phone: 202-223-3111 Fax: 202-466-1562
Joseph T. Hansen, International President
Anthony M. Perrone, International Secretary-Treasurer

United Brotherhood of Carpenters and Joiners
Carpenters Building, 101 Constitution Ave., NW, Washington DC 20001
Phone: 202-546-6202 Fax: 202-543-5724
Doug McCarron, President
Jim Patterson, Sceretary

International Association of Bridge, Structural and Ornamental Ironworkers

United Unions Building, Suite 700, 1750 New York Ave., NW, Washington, DC 20006
Phone: 202-383-4800 Fax: 202-638-4856
Joseph Hunt, President
Michael Fitzpatrick, General Secretary
Dennis Toney, General Treasurer
International Union of Elevator Constructors (IUEC)
7154 Columbia Gateway Dr., Columbia, MD21046
Phone: 410-997-9000 Fax: 410-997-0243
Dan Brigham, President
Kevin Stringer, Secretary-Treasurer
International Association of Fire Fighters (IAFF)
1750 New York Ave., NW, Washington DC 20006
Phone: 202-824-1535 Fax: 202-638-5294
Harold Z. Schaitberger, President
Vincent J. Bollon, Secretary-Treasurer
Glass, Molders, Pottery, Plastics and Allied Workers International Union
608 E. Baltimore Pike, PO Box 607, Media, PA 19063
Phone: 610-565-5051 Fax: 610-565-0983
Joseph Mitchell, Sr., President
Office and Professional Employees International Union
265 West 14th St., Suite 610, New York, NY 10011
Phone: 212-675-3210 Fax: 212-727-3466
Michael Goodwin, President
Carol Dupuis, Secretary-Treasurer
International Union of Operating Engineers
1125 17th Street, NW, Washington, DC 20036
Phone: 202-429-9100 Fax: 202-778-2616
Vincent Giblin, General President
Christopher J. Hanley, General Secretary-Treasurer
Operative Plasters and Cement Masons International Association of the United States and Canada
11720 Beltsville Drive, Suite 700, Beltsville, MD 20705-3166
Phone: 301-623-1000 Fax: 301-623-1032
Patrick D. Finley, President
Earl F. Hurd, Secretary-Treasurer
Sheet Metal Workers International Association
1750 New York Avenue, NW, Washington, DC 20006
Phone: 202-783-5880
Michael J. Sullivan, President
Thomas J. Kelly, Secretary-Treasurer
United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada
901 Massachusetts Avenue, NW, Washington, DC 20001
Phone: 202-628-5823 Fax: 202-628-5024
William P. Hite, General President

Thomas Patchell, Secretary-Treasurer
Laborers International Union of North America (LIUNA)
Moreschi Building
905 16th St., NW, Washington, DC 20006
Phone: 202-737-8320 Fax: 202-737-2754
Terrence O'Sullivan, President
Armand E. Sabitoni, Secretary-Treasurer
International Association of Machinists and Aerospace Workers
9000 Machinist Place, Upper Marlboro, MD 20772
Phone: 301-967-4500 Fax: 202-967-4588
International Brotherhood of Painters and Allied Trades
United Unions Building
1750 New York Avenue, NW, Washington, DC 20006
Phone: 202-637-0700 Fax: 202-637-0771
James A. Williams President
George Galis, Secretary-Treasurer
Service Employees International Union (SEIU)
1313 I Street, NW, Washington, DC 20005
Phone: 202-898-3200 Fax: 202-898-3402
Andrew Stern, President
Anna Burger, Secretary-Treasurer
International Brotherhood of Teamsters
25 Louisiana Avenue, NW, Washington, DC 20001
Phone: 202-624-6800 Fax: 202-624-8970
James Hoffa, Jr., President
C. Thomas Keega, General Secretary-Treasurer

Metal Trades Department, AFL-CiO • 815 16th Street, NW •Washington, DC 20006
Phone: 202-508-3705 • Fax: 202-508-3706 • email: metaltradesweb@aol.com

RONALD AULT
President
Metal Trades Department AFL-CIO

Prior to being elected as the Metal Trades Department's President, Mr. Ault served for four years as a General Representative of the Department. A former organizer with the International Union of Operating Engineers and a former business representative for the International Association of Machinists and Aerospace Workers, Ault is a career Labor Representative with more than 30 years experience.

Mr. Ault served a four-year enlistment with the U.S. Navy, including a tour of duty in Vietnam (1968-69). Mr. Ault went to work at the Norfolk Naval Shipyard in 1971; he was hired as an apprentice Inside Machinist. Graduating as a journeyman Inside Machinist with honors four years later, Ault served in various union positions. From 1980 to 1985, he served as president of the Tidewater Virginia Federal Employees Metal Trades Council and the Chairman of the Conference Committee at NNSY in Portsmouth, Virginia. Ault served as Campaign Coordinator in the Metal Trades Department's successful drive for union recognition at the Avondale Shipyard in New Orleans and was the Chief Negotiator for the historic first union contract at the yard.

A native of Amity, Arkansas, Mr. Ault is married, the Father of four children and currently lives in Waldorf, Maryland.

Tom Schaffer
General Representative
Metal Trades Department AFL-CIO

- Served my apprenticeship for Iron Workers Local 67 in Des Moines, Iowa and graduated to journeyman level in 1974.

- Worked both as an Iron Worker and later in the manufacturing business at Artistic Manufacturing builders of many brands of church ware. I left the company in 1977 as plant manager and went back into construction.

- Moved to San Diego in 1978 and was employed as a journeyman Iron Worker in the construction industry.

- I was hired while in San Diego by Rockwell International who was then the Hanford Site contractor and started working at the Hanford Site in 1980 as an Iron Worker/Rigger.

- Was elected to the position of Secretary Treasurer of the Hanford Atomic Metal Trades Council (HAMTC) in 1994, and later served a dual role as Secretary Treasurer and HAMMER Union Liaison for the training facility for two terms.

- In 1999 I was elected as President of HAMTC and served two and a half terms.

- During my last term I was asked to join the Metal Trades Council's parent organization the Metal Trades Department AFL-CIO. I accepted and have served as a General Representative since September of 2003.

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Operative Plasterers' & Cement Masons' International Association

Operative Plasterers' and Cement Masons' International Association of the United States and Canada

OP&CMIA members represent skilled plasterers, cement masons, shop hands and associated members. Plasterers finish interior walls and ceilings of buildings; apply plaster on masonry, metal, and wire lath or gypsum. Bridges, canals, dams, reservoirs, roads and many other engineering feats would be impossible without the skills of OP&CMIA cement masons. Cement masons are responsible for all concrete construction, including pouring and finishing of slabs, steps, wall tops, curbs and gutters, sidewalks, paving and other concrete construction.

What Do Operative Plasterers and Cement Masons Do?

Plasterers' Work includes these valuable skills:

- All Types of Plastering
- Exterior Insulated Finish System (EIFS) Application – including the installation of the insulation board whether adhesive-applied or fastened with mechanical fasteners.
- Restoration Work
- Acoustical Tile Application
- Artificial Marble Work
- Fireproofing Application
- Epoxy Coating Application
- Sculpturing
- Swimming Pool Interior Application
- Wallboard Taper and Joiner/Drywall Application/ Level 5 Drywall Skim coating
- Modern Veneer and Hardcoat Applications
- Cornice and Ornamental Plastering
- Building Illusions and Props for the Motion Picture Industry

Cement Masons' Work includes these valuable skills:

- Concrete Finishing on Buildings, Highways, Sidewalks, Curbs and Gutters
- Concrete Saw and Scoring Machine Operation
- Floor Hardeners, Sealers and Curing Applications
- Gunite Operation
- Laser Screed Operation
- Installing Seamless Flooring (Epoxy)
- Sand Blasting and Bush Hammering
- Restoration Work (Concrete Repair)
- Waterproofing
- Form Setting
- Grouting
- Epoxy Coatings Application
- Decorative Concrete: Stenciled, Stamped, Stained

What is an Operative Plasterers and Cement Masons Apprenticeship Program?

As part of its long-standing tradition of pursuit of excellence, the OPCMIA, in the post-war era, began to establish apprenticeship to assure a constant supply of highly skilled craftsmen. Just as the OPCMIA advocated use of quality materials, it also demanded quality Plasterers and Cement Finishers who were properly trained in the craft. In 1946 the union joined with the Contracting Plasterers' International Association and the Associated General Contractors to establish the National Apprentice Training Standards. Through this program the union was able to guarantee a steady flow of qualified Plasterers and Cement Finishers to an ever-expanding construction industry. Working closely with the Veterans' Administration, the union indentured a large number of returning servicemen into apprenticeship programs.
OPCMIA Apprentices receive a minimum of 144 hours of classroom training, plus hands-on and/or on-the-job training.

Gerald Ryan

Director, Training, Health & Safety
Operative Plasterers' and Cement Masons' International Association

Gerald Ryan serves as Director of Training, Health & Safety for the Operative Plasterers' and Cement Masons' International Association, where he works to deliver programs that inform, train, and protect workers in the construction industry, particularly cement masons and plasterers.

In his thirty years as a third-generation cement mason, Mr. Ryan witnessed first-hand the hazards of the jobsite. When an on-the-job injury ended his ability to work with the tools of the trade in 1992, he became an instructor at his local, helping other workers prevent the same types of injuries he had seen and experienced. He helped set up the Minnesota, North Dakota, Northwestern Wisconsin Cement Masons' Local 633 Apprenticeship & Training Center, and then managed the expansion of the center's training programs from 1996 to 2002.

Since 2002, he has been Director of Training, Health & Safety for the Plasterers' & Cement Masons' International, where he has led a team of instructors in publishing updated plastering and cement masonry curricula, training publications addressing job hazards specific to cement masons - such as silicosis and contact dermatitis - and myriad other training initiatives designed to reach the both the apprentice and the experienced journeyman, ensuring their safety on the job.

Gerry remains directly involved with Safety and Health for his International's members by offering OSHA 500 training courses to increase the number of OSHA trainers available to his International along with numerous other training programs being conducted across the country for their membership.

He also encourages instructors to network with each other in sharing training information and resources. He has worked closely with his Louisiana and Gulf Coast Locals to help them renew their apprenticeship programs following the devastation of Hurricanes Katrina and Rita.

He recently worked with the National Labor College to create a program that will allow OPCMIA instructors to earn a Certificate in Labor Education. This new program gives instructors the opportunity to earn college credit while improving their teaching skills and - most importantly - while serving their Local members.

Today, Gerry continues to work with Plasterers' and Cement Masons' Locals to set-up, improve, and expand their apprenticeship training programs, journeyman upgrade training opportunities, and safety and health training while administering combined DOE and EPA grant funds.

Health & Safety

Health and safety hazards are a fact of construction work. That's why our Members' health and safety are a top priority for the OPCMIA.

The best way to guard the health and safety of ourselves and our union sisters and brothers is through superior training. As an organization, we strive to share this safety priority by offering health and safety training to our signatory contractors.

Why should I take training courses? Training courses will teach you ways to prevent worksite injuries and illnesses and may help you save a sister's or brother's life. Your sister or brother may learn something that will help them save your life. When you learn ways to stay safe on the job you are helping not only yourself but also your colleagues and your employer by reducing the chances for injuries and illnesses to occur.

What training should I take? The basic training classes offered by your Local or JATC are OSHA 10-Hour and 30-Hour Construction Outreach Training, with topics chosen first according to OSHA regulations, and additional topics selected to meet the needs of the workers in each class (i.e., confined space, concrete & masonry, scaffolds, etc.)

Thanks to a national training partnership with the American Red Cross, we also offer CPR and First Aid training. These essential training classes are beneficial at the jobsite and at home.

We also offer a variety of other focused training courses to help workers stay safe on the jobsite. These courses include:

- Residential Construction Safety
- Scaffolding
- Hazardous Waste Worker
- Fall Prevention
- Confined Space Entry
- Professional Skin Protection for Cement Workers

In our industry, we cannot afford to get complacent on the jobsite. Be vigilant about your own health and safety, and look out for your brothers and sisters on the jobsite. Keep each other safe!

Job Corps Pre-Apprenticeship

Job Corps is a vocational training program designed for youth ages 16 – 24. It is fully funded by the U.S. Department of Labor and supported nationally by the OPCMIA, its affiliated Local Unions, Registered Apprenticeship Programs, Employers Associations and Signatory Employers. Job Corps training is FREE to qualifying candidates.

Job Corps offers the following career advancing opportunities:

Vocational “Pre-Apprenticeship” Training in the Trade of Your Choice.
Free Room and Board While Training.
Academic Training to Help You Complete High School or Obtain a GED Certificate.
Free Drivers Education Training.
Vocational Counseling.
Industry Tools, Work Clothes, and Personal Safety Equipment.
Job Placement Assistance Upon Graduation.
Mentoring by Industry Professionals.

If you or someone you know is interested in joining Job Corps or would like more information please call (800) 733-JOBS or (800) 733-5627 or go to the JOB CORPS website for more information. An operator will provide you with general information about the program, refer you to the admissions counselor closest to where you live and mail you an information packet.

Operative Plasterers' and Cement Masons' International Association of the United States and Canada

Apprenticeship

The system of apprenticeship was first developed in the later middle ages and came to be supervised by craft guilds and town governments. A master craftsman was entitled to employ young people as an inexpensive form of labor in exchange for providing formal training in the craft.

Today's apprenticeship training is managed by labor and management as equal partners, and it has evolved to meet the needs of modern construction industry. An apprentice in the OPCMIA will be taught the skills and knowledge of the trade through a combination of on-the-job training and related classroom instruction. This two pronged approach to training permits a young person beginning their career to advance quickly while becoming an ever increasingly productive member of the crew.

OPCMIA apprenticeship programs offer a standardized curriculum and include the following important aspects of training:

- Introduction to the industry and trade history
- Identification and proper use of tools
- Material composition and mixes
- Repair and restoration
- Scaffolding and OSHA Safety Courses
- Blueprint reading
- First-aid and CPR Certification

Apprentice Competitions: Join The Challenge!

The OPCMIA is proud to give our apprentices the opportunity to demonstrate their skills in International Apprentice Competitions. At these important events, apprentices come together from Locals and Training Centers across the U.S. and Canada to test their skills against those of their peers in two days of intense competition.

Apprentices, chosen from among their peers at the Local level, compete for Third Place, Second Place and, of course, the coveted First Place title. The competitions are held during trade shows, garnering attention from industry leaders in both the plastering and concrete trades who come to the shows from across the nation and around the globe. Apprentices proudly show off their skills to show attendees as well as their peers. Most importantly, they ‘show what they know’ to the competition judges -- knowledgeable craftspersons with decades of experience from OPCMIA Locals, major contractors, and regional building trades councils.

Support for the competitions comes from some of the most recognized associations in the construction industry such as the American Concrete Institute and Association of the Wall and Ceiling Industry, and from vendors including Artcrete, Inc.; Bon Tool Co.; Kraft Tool Co.; Marshalltown Company; and United States Gypsum Company.

Being chosen to go to the International Apprentice Competition is a proud moment for each apprentice. Competing is a coveted opportunity to show off skills learned through hard work and dedication to the apprenticeship program -- and a memory for a lifetime.

PLASTERERS' AND CEMENT MASONS' JOB CORPS TRAINING PROGRAM

The Job Corps experience has provided thousands of America's youth the free opportunity to finish school and learn a marketable trade. Our trainees gain valuable life lessons that help them to become productive citizens in our communities and leaders in our industry. The construction industry is one of the largest segments of our economy and career opportunities in the plastering and cement masonry trades offer both financial security and professional gratification.

If you are an employer who would be interested in hiring one of our graduates, or if you need assistance referring a young person to enroll in our program, please call us at: **1-800-424-5111**. If you are ready to enroll in Job Corps, please contact us at: **1-800-733-JOBS**.

TRADE INFORMATION
OCCUPATIONAL OUTLOOK HANDBOOK:

Cement Mason's OCH | Plasterer's OCH

The plasterers and cement masons are part of the larger family of building and construction trades with an estimated 6.6 million skilled workers. We work on projects ranging from home remodeling to high-rise office buildings. The skills and education a trainee receives in Job Corps are continued when we assist the graduate in securing industry employment and becoming an indentured apprentice.

Apprenticeship, which can last 3 to4 years, is the construction industry's way of passing down skills from one generation to the next. Apprentices earn while they learn. The education received can be compared to a college education and is an essential part of perpetuating the level of skill needed to produce high-quality construction. To find more specific information about these two trades, follow the links provided below for our informational brochure and/or a full description of the trades offered by the U.S. Department of Labor's Occupational Outlook Handbook, which is a nationally recognized source of career information.

Home Builders Institute
International Masonry Institute
International Union of Operating Engineers
International Union of Painters and Allied Trades
Operative Plasterers' and Cement Masons'
Transportation • Communications Union
United Brotherhood of Carpenters
UAW Labor Employment and Training

NTC Program Information (listed alphabetically)

Appalachian Council/AFL-CIO

The AFL-CIO Appalachian Council is a nationally recognized provider of education and training services. Founded in 1964, the Council has served the training and employment-related needs of America's youth for some 39 years.

Under contract with the United States Department of Labor, National Office of Job Corps, the organization is providing training for young men and women at three Job Corps centers including the Pittsburgh Job Corps Center located in Pittsburgh, Pennsylvania; the Charleston Job Corps Center in Charleston, West Virginia; and the Batesville Job Corps Center located in Batesville, Mississippi.

In addition the Council provides enhanced job development and other placement services for job Corps graduates and former enrollees.

Home Builders Institute

Home Builders Institute (HBI), the workforce development arm of the National Association of Home Builders (NAHB), is dedicated to the advancement and enrichment of craft education and training programs serving the needs of the housing industry. For more than 30 years, HBI has trained skilled workers in residential construction, promoted the industry as a career, and helped the NAHB membership address its need for qualified employees. HBI offers: construction trades training; job placement services; the Building Careers Job Bank, an online resource; NAHB Student Chapters; school-to-career programs; workforce development assistance; national standards-based instructional materials; and the Residential Construction Superintendent designation program.

International Masonry Institute

The International Masonry Institute (IMI) is a joint labor management trust dedicated to improving market promotion and training for the unionized masonry industry. It serves members of the International Union of Bricklayers and Allied Craftworkers (BAC) and the contractors who employ them. IMI programs are supported by contributions collectively bargained at the local or regional level. IMI provides apprenticeship and training programs for bricklaying, tilesetting, stone and marble masonry, mosaic and terrazzo work, cement finishing, plastering, masonry restoration and refractory work. IMI funds and operates a National Training Center, regional facilities throughout the U.S., and mobile training units that deliver quality training on an as-needed basis.

International Union of Operating Engineers

The International Union of Operating Engineers (IUOE) has proudly participated in the Job Corps Training Program for the past 36 years. Thousands of economically disadvantaged young adults have benefited from the IUOE Job Corps Training Program and have continued their success by becoming productive operating engineers, apprenticeship and training instructors, local union business agents and contractors.

Presently, the IUOE contracts with the U.S. Departments of Labor and Agriculture to provide craft training at 13 Job Corps Centers, including a new Stationary Engineering Program at New Haven, Connecticut. The IUOE has 21 programs and 33 operating engineer instructors, who are all IUOE Local members. The IUOE annually trains up to 470 young adults in heavy equipment operation, heavy equipment maintenance and repair, surveying, stationary engineering, and basic and advanced asphalt paving. The IUOE Job Corps Program is a pre-apprenticeship program and, depending on the student, training typically lasts one year. Instruction consists of classroom, hands-on equipment training and community service projects as well as social skills training designed to enhance the employability of each young adult.

International Union of Painters and Allied Trades

The International Union of Painters and Allied Trades (IUPAT) has been involved in Job Corps since 1969 and is one of five building trades unions offering training programs through Job Corps. Today, our union sponsors over 55 Job Corps programs throughout the United States. Although the majority are painting programs, the IUPAT also offers a floor covering program; three glazing programs; three sign, display, and billboard programs; and an advanced painting program. All IUPAT Job Corps Programs take approximately one year to complete, and consist of on-the-job training, social skills development, and general education.

National Plastering Industry's Joint Apprenticeship Fund

Sponsored by the United States Department of Labor / Employment and Training Administration Office of Job Corps, The Plasterers and Cement Masons' Job Corps Training Program operates 59 training facilities to provide career training to disadvantaged youth throughout the United States. Qualified journey-level instructors teach young people the basics of the plastering or cement masonry trades through a combination of classroom instruction and community service construction projects. Upon graduation, students are prepared to enter into the industry workforce as indentured apprentices. Industry sponsors include both Labor and Management in partnership to create the National Plastering Industry's Joint Apprenticeship Trust Fund.

Transportation-Communications International Union

The Transportation-Communications International Union has contracted with the United States Department of Labor's Job Corps to provide an Advanced Transportation Clerical Program for our nation's youth. Beginning with just two sites in 1971, TCU's Manpower Training Department is now contracted to train 380 students nationwide at eight facilities.

UAW Labor Employment and Training Corporation

UAW Labor Employment and Training Corporation (UAW-LETC) is a private non-profit, public benefit corporation incorporated in the State of California, with offices in sixteen locations in six states providing an array of employment and training-related services to employers, job seekers, and youth. UAW-LETC also has a wholly owned subsidiary, ICI Enterprises, Inc., that operates the educational and vocational programs of the Long Beach Job Corps Center. UAW-LETC's mission is to provide our customers nationwide with highest quality employment, training, and job-related services and to promote the development of a quality workforce with economic security.

United Brotherhood of Carpenters

The Carpenters Union (UBC) is more than 520,000 highly skilled men and women throughout the building-trades industries. The UBC represents and offers training to North America's carpenters, cabinetmakers, millwrights, piledrivers, lathers, framers, floorlayers, roofers, drywallers, and workers in forest-products and related industries. It began in 1881 when 36 carpenters from 11 cities formed a national union with a constitution, a structure, and two thousand members. From humble beginnings arose a powerful political and economic force, setting the standards for wages, benefits, conditions and quality on every project in the U.S. Much has changed in a century, but growth still rests on reaching out and opening doors to all working carpenters.

Instructor Training

For course descriptions and other pertinent information, click to open a flier:

OPCMIA Instructor Training - May 2008

OPCMIA Instructor Training - September 2008

Ready to enroll? Go to the National Labor College. (Full instructions for how to register online are in each flier.)

MORE TRAINING OPPORTUNITIES!

The National Labor College offers a series of Building Trades Courses on topics important to union leaders, including Business Managers, Presidents, Training Coordinators, Instructors, Organizers *and* Members:

- How to Start a Vocational ESL Program (English as a Second Language)
- Organizing
- Negotiating with Contractors
- Labor Law (specific to the construction industry)

and MORE!

Courses are usually only 5-7 days (no need to commit to an entire semester).

REGISTER BY JULY 15th

Go to our website www.NLC.edu. On our homepage you'll see a "hot button" link for registration.

* Click on the logo to go directly to the IQ.Web Registration site.

* Request Access into the IQ.Web site. By searching the Union Skills Course Search page you can register for Teaching Techniques I and Teaching Techniques II classes set up **for OPCMIA only**.

* Select that class and complete the information requested, when completed submit your info. You'll receive a confirmation email.

* For questions about registering please contact NLC Registration at 301-431-5422.

* For questions about the OPCMIA program please contact Gerry Ryan at gryan@opcmia.org, 240-475-8405 (cell) or 301-623-1000 (office).

* Remember to make your overnight rooming arrangements directly with our Front Desk at 301-431-6400 (rates are per night and include three meals).

Single room & board $180
Double room & board $112.50

**The guest must have someone to double with as NLC does not double it's guests.

There are a limited number of single occupancy rooms available at $152.50 per night (including three meals).

NLC NATIONAL LABOR COLLEGE

OPCMIA Instructor Education at the NLC

- **These courses are part of a three year program through which students can potentially earn a 12-credit hour NLC Labor Education Certificate.**
- **Teaching Techniques II and Instructional Systems Development begin Sept 21 at 7:00p.m. and run until noon on the 26th at the National Labor College in Silver Spring, MD.**
- **Register by July 15th at www.NLC.edu. (see directions at the left)**
- **Questions should be directed to Gerry Ryan at the OPCMIA - gryan@opcmia.org, 240-475-8405 (cell) or 301-623-1000 (office).**
- **Students will be responsible for their own tuition, room and board, and travel expenses.**
- **Tuition is $474 for each 3 credit class.**

LBED3411 TEACHING TECHNIQUES II

A follow-up to the basic Teaching Techniques I course, this advanced course offers participants the opportunity to upgrade their teaching skills and learn methods for designing effective teaching outlines, expand the range of techniques they use, and how to write their own teaching materials. Successful completion of Teaching Techniques II qualifies the student to earn three college credits.
Prerequisite: LBED 2401 Teaching Techniques I

LBED4450 INSTRUCTIONAL SYSTEMS DESIGN

Students will receive an introduction to the resources and technologies available for developing and updating instructional material. The course will review relationships between curricula and instructional aids. Successful completion of Instructional Systems Design qualifies the student to earn three college credits.
Prerequisites: LBED 2401 Teaching Techniques I and LBED 3411 Teaching Techniques II

NLC NATIONAL LABOR COLLEGE
National Labor College
10000 New Hampshire Avenue
Silver Spring, MD 20903
800-462-4237

OPEIU #2

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Sheet Metal Workers International Association

SHEET METAL WORKERS INTERNATIONAL ASSOCIATION (SMWIA)

From tinsmiths to high tech specialists, Sheet Metal Workers have applied their skills long before our founding members organized our union on January 25, 1888 in Toledo, Ohio. We have established a reputation as a highly skilled workforce whose abilities benefit everyone where they work, live, play and pray. We reach for new avenues in our constant pursuit for a better quality of life for all workers.

Michael J. Sullivan, General President
Joseph J. Nigro, General Secretary-Treasurer

The Sheet Metal Workers' International Association represents 150,000 skilled craft persons with almost 200 affiliated local unions covering all 50 states and the provinces of Canada. Sheet metal workers perform architectural metal work, installation and service of heating, ventilating and air conditioning systems, shipbuilding and more.

Governmental Affairs Department

The SMWIA Government Affairs Department works for the interests of members and their families on Capitol Hill and in America's State Capitals. The Government Affairs Department promotes the union by testifying on Capitol Hill, lobbying members of Congress on issues that matter to members, coordinating with local unions to empower members at the local level and by working with the SMWIA's fellow AFL-CIO unions. It achieves its purpose through the collective voice of the SMWIA's members and their families.

Additionally, the SMWIA Political Action League (PAL) raises money through voluntary contributions from members and uses those funds to elect political leaders who are sympathetic to the cause of working Americans.

Workplace Safety

The Sheet Metal Workers believe death or injury should not be the price of going to work each day. Seventy years ago, construction estimating factored in the number of lives lost as a cost of building a project. The SMWIA fights to ensure those days never come back again. We support compensation for asbestos victims through our lobbying and political activity as well as ergonomic reform and we are fighting against the attack on OSHA workplace safety provisions.

SHEET METAL OCCUPATIONAL HEALTH INSTITUTE TRUST

Our mission is to develop and promote health and safety resources for the sheet metal industry, thereby creating a safer, injury-free workforce.

April 17, 2008

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ABOUT

The Sheet Metal Occupational Health Institute Trust (SMOHIT) was founded in 1986 to address the impact of decades-long asbestos exposure on those working in the sheet metal industry. To date, more than 45,000 sheet metal workers have been screened as part of our ongoing Asbestos Screening Program.

SMOHIT is a Joint Labor Management Trust whose mission is to provide industry-leading health and safety solutions to minimize occupational illnesses and injuries for sheet metal craftsmen.

We serve more than 123,000 members of the Sheet Metal Workers' International Association (SMWIA) and 4,500 members of the Sheet Metal and Air Conditioning Contractors' National Association (SMACNA).

While screenings and research on asbestos and other hazardous materials continue to be the cornerstone of SMOHIT's efforts, our expanding mission now includes being the sheet metal industry's leading resource for health and safety products and services. We will achieve this goal by offering cutting-edge training using interactive DVD, CD-ROM, and Web-based resources.

Gary Batykefer
Administrator
Sheet Metal Occupational Health Institute
Sheet Metal Workers International Association

Gary Batykefer is head of the Sheet Metal Occupational Health Institute (SMOHIT) a joint labor-management health and safety organization serving the sheet metal industry. For the past six years he has led the design and development of health and safety training products and services that promote the reduction of occupational illness and injury. As SMOHIT Administrator, he has directed the development and distribution of more than 28 health and safety products and has met the industry's demand of enhanced medical screening programs.

Gary began his career as a mechanical engineering student at Gannon University and graduated with honors from the Dean Institute of Technology with a specialty in mechanical and tool and die design. For more than 29 years, Gary has served the sheet metal industry by addressing issues of mutual concern between labor and management. His background covers extensive work in designing and initiating journeyman training classes, serving as an active member of Sheet Metal Local 12 in Pittsburgh, PA and serving as a Trustee prior to being appointed SMOHIT Administrator.

Dale P. Hill
International Representative
Sheet Metal Workers International Association

Dale P. Hill was employed by the Sheet Metal Workers International Union (SMWIA) President, Michael J. Sullivan, in December 1999 as International Representative for the Rocky Mountain Region and currently serves in that capacity.

He served as Business Manager for Sheet Metal Workers Local Union # 207 in Casper, Wyoming for 19 years from December 1980 to December 1999. During that period he also served as President of the Wyoming State American Federation of Labor –Congress of Industrial Organizations (AFL-CIO), and President of the Wyoming State Building Trades Council.

In addition to his position as SMWIA International Representative, Mr. Hill currently represents the International Association on the SMWIA Nuclear Hazardous Materials Council, is the Service Specialist for the International Association for the Heating, Ventilation, and Air Conditioning Industry, and continues to serve as President of the Wyoming State AFL-CIO.

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Put Your Best Foot Forward	CD, Instructor's guide, quiz questions, certificate of completion	2 hours	

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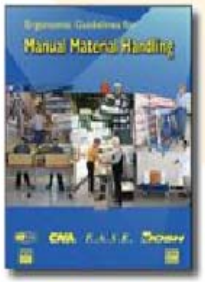

NIOSH Guidelines Fact Pack

FDA Clears First Respirators for Use in Public Health Emergencies

Beryllium Memo from the Department of Energy

FACT PACK

Sheet Metal Occupational Health Institute Trust

Safety Matters

Hexavalent Chromium

The following information is presented courtesy of the 3M Occupational Health and Environmental Safety Division (OH & ESD), and was adapted to promote the SMOHIT Total Wellness Program.

What is hexavalent chromium?

Hexavalent chromium Cr(VI) is a metal particle that typically is created by industrial process but can also develop naturally in rocks. It is a strong oxidizer, meaning that it can react easily with other elements, and because of this hexavalent chromium has the ability to produce hard coatings. It's a common ingredient in paints for automobiles, boats, and aircraft for this reason, but this fact also accounts for why hexavalent chromium is considered to be a health hazard, too.

What is OSHA's Hexavalent Chromium Cr(VI) Standard?

In early 2006, the Occupational Safety and Health Administration (OSHA) released what is called the final "Hexavalent Chromium Cr(VI) Standard." The new standard set the permissible exposure limit (PEL) for hexavalent chromium at 5 µg/m3 (micrograms per cubic meter) as an eight-hour, time-weighted average (TWA). The respiratory protection requirements for different industries (general industry, construction, and shipyards) are similar. The standard mandates that all respiratory protection requirements, including respirator choice, to follow OSHA 1910.134 requirements; for a complete copy of the Hexavalent Chromium Cr(VI) Standard, visit the OSHA website at ***www.osha.gov***.

What are the primary industries and applications affected?

According to OSHA, the central industries most affected by the standard are those involving stainless steel fabrication; heavy-duty coatings and paints for automobiles, planes, trains, and boats; electroplating; and chrome-based pigment producers. Primary applications affected include welding (specifically on stainless steel surfaces), spraying heavy-duty coatings and paints, and chrome plating.

- Click here to read OSHA's Small Entity Compliance Guide for the Hexavalent Chromium Standtards.
- Click here for Hexavalent Chromium Air Monitoring Variables Checklist.
- Click here to read SMACNA's fact sheet on the major provisions of the final standards for occupational exposure to hexavalent chromium.

Which types of Cr(VI) exposure are covered by the standard?

The OSHA standard covers exposures from any source with the exception of the following:

1. Portland cement.
2. Application of regulated pesticides.
3. All cases where an employer has objective data showing that a material, process, operation, or activity involving chromium will not release dusts, fumes, or mists of chromium (VI) in concentrations at or above 5 µg/m3 as an eight-hour TWA under normal conditions of use.

When does the standard take effect?

The PEL, respiratory protection, and engineering controls take effect on these dates:

- Employers with more than 20 employees: November 27, 2006
- Employers with fewer than 20 employees: May 30, 2007
- Feasible engineering controls must be in place: May 31, 2010

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How will the standards affect sheet metal workers?

First and foremost, employers, foremen, and supervisors need to take a fresh look at their respirator programs in light of the lower exposure limit. Certain employers might have to provide respiratory protection to sheet metal workers and determine the feasibility of engineering controls including ventilation. If they have not done so already, sheet metal work employers need to make an exposure determination to establish whether or not the new OSHA standard and its requirements apply and, if so, put into place the necessary compliance measures.

How do I check for exposure sources in the workplace?

The Hexavalent Chromium Cr(VI) Standard allows exposure determinations to be performed either through monitoring or by estimating exposures utilizing and combination of air sampling, historical monitoring data, and objective data. If historical or objective data are used, it must reflect workplace conditions closely mirroring the processes, material types, control methods, work practices, and environmental conditions in the customer's current operations.

What is the best way to check for the presence of Cr(VI)?

You should use a sampling pump and filter in order to monitor for hexavalent chromium for an eight-hour TWA, referring to NIOSH Methods 7604 (by ion chromatography) and 7600 (by visible absorption spectrophotometry) or OSHA Method ID-215 as noted in the Hexavalent Chromium Cr(VI) Standard. Also be certain to check with an American Industrial Hygiene Association (AIHA) accredited laboratory for assistance in choosing the right sampling and analytical method for you. To contact an AIHA lab or an industrial hygienist, visit AIHA's home page at ***www.aiha.org***, and select "Consultants" or "Laboratories."

When is respirator use necessary?

Initially, all employers should attempt to achieve permissible exposure limits through engineering and work practice controls. If this is not possible, respirator use is a must in cases where exposure levels exceed the PEL, including: a. While engineering and work practice controls are being developed; b. During maintenance and repair activities for which engineering and work practice controls are not possible; c. When all possible engineering and work practice controls are in place and are still not capable of reducing exposure levels to or below the PEL; d. When sheet metal workers are exposed above the PEL for fewer than 30 days per year and the employer has not chosen to put in engineering and work practice controls; and e. Any emergency situation.

Which respirator is right for sheet metal work?

Sheet metal workers should choose their respirator type based on their workplace conditions and contaminant levels:

1. N95 filters may be used where no oil aerosols are present;
2. R or P95 filters may be used where oil aerosols are present;
3. Filtering facepiece respirators, elastomeric half-facepiece respirators, and full-facepiece respirators, when qualitatively fit-tested, may be used up to 10 × PEL with appropriate filters;
4. Full-facepiece respirators may be used up to 50 × PEL when they are quantitatively fit-tested and are equipped with appropriate filters;
5. Loose-fitting facepieces may be used up to 25 × PEL; and
6. Tight-fitting full facepieces, hoods, and helmets with supplied air or powered-air purifying respirators may be used up to 1,000 × PEL.

An employer's initial compliance measures for the standard should include:

1. Read and understand the new standards in their entirety.
2. Complete an initial exposure assessment.
3. Acquire all necessary protective work clothing and equipment.
4. Make certain to comply with other provisions of the standard as required.

FACT PACK

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Safety Matters

Beryllium

What is beryllium?

Beryllium is a silver-gray, naturally occurring, lightweight metal. It is extremely hard, is a good electrical and thermal conductor, provides excellent corrosion resistance, and is non-magnetic. These properties make beryllium suitable for use in a wide range of industries including:

- **Metal working**: Pure beryllium, copper and aluminum alloys, jet brake pads, aerospace components, golf clubs, non-sparking tools, wheelchairs, satellite mirrors, and space telescopes.
- **Ceramic manufacturing**: Semiconductor chips, ignition modules, crucibles, jet engine blades, and rocket covers.
- **Electronics**: Transistors, heat sinks, X-ray windows.

- **Atomic energy**: Heat shields, nuclear reactors, and nuclear weapons.
- **Laboratory work**: Research and development, metallurgy, chemistry.
- **Extraction**: Ore and scrap metal.
- **Dentistry**: Crown alloys, bridges, dental plates, and dental work appliances.

Are there currently any OSHA regulations for beryllium?

The current Occupational Safety & Health Administration (OSHA) PELs for beryllium are: (a) 2 micrograms/m3 as an eight-hour time-weighted average (TWA) averaged over an eight-hour work shift, (b) 5 micrograms/m3 as a ceiling not to be exceeded for more than 30 minutes at a time and (c) 25 micrograms/m3 peak exposure never to be exceeded.

The OSHA limits have been in place for nearly 30 years and have not been revised during that time. The American Conference of Governmental Industrial Hygienists (ACGIH) has published a Notice of Intended Change for its Threshold Limit Value (TLV) for beryllium that would lower the TLV from the current level of 2 micrograms/m3 to 0.2 micrograms/m3, and National Institute for Occupational Safety and Health (NIOSH) recommendation on exposure limits (REL) not to exceed 0.5 milligrams/m3.

What are the health effects of beryllium disease?

Beryllium disease primarily affects the lungs, and occurs when beryllium particles, dust, or fumes are inhaled. It also affects the skin, causing poor wound healing and rash or wart-like bumps. A person can contract beryllium disease over a short period of exposure time and even after being away from beryllium exposure for many years. It can cause lung cancer in humans, and has been classified as a human carcinogen by the International Agency for Research on Cancer (IARC), the expert cancer agency of the World Health Organization (WHO).

Chronic beryllium disease (CBD) only develops in workers who have become sensitized to beryllium (a "sensitized" worker is one who has developed an allergic reaction to beryllium. Workers may become sensitized at any point during job exposure, or in some cases may not become sensitized until after leaving a job where there has been beryllium exposure. CBD cases have occurred among family members of beryllium-exposed workers; information to reduce "carry-home" exposure can be found later in this Fact Pack.

There are two forms of beryllium disease:

(1) Acute. Acute beryllium disease usually has a quick onset and resembles pneumonia or bronchitis.

(2) Chronic. Chronic beryllium disease has an extremely slow onset and is caused by an allergic reaction or sensitization to beryllium. Even brief or small exposures can lead to this form of disease, and exposure to beryllium particles, dust,

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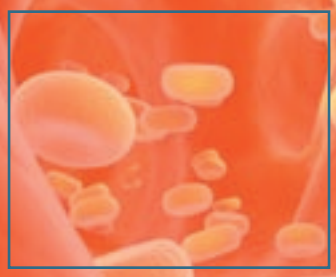
or fumes can cause serious illness. CBD is irreversible and sometimes causes fatal scarring (fibrosis) of the lungs; it is primarily a lung disease, but may also affect other organs, particularly the lymph nodes, skin, spleen, liver, kidneys, and heart.

The average time from initial beryllium exposure to the development of CBD symptoms is 10-15 years. This means you can be exposed to beryllium today and not suffer any adverse health effects for decades. Such effects have appeared in some people as soon as a few months after exposure, and in others as long as 30 years after the fact. Both doctors and researchers believe that some with CBD have lived with it and died from other causes without even knowing they had CBD.

The symptoms of CBD are similar to those of several other diseases including sarcoidosis, which affects the lungs and often other organs. Studies have found that in some cases doctors have misdiagnosed what turned out to be CBD as sarcoidosis or other diseases.

What are the symptoms of beryllium disease?

Beryllium disease is often accompanied by several symptoms and abnormalities including:



- Persistent coughing
- Chest and joint pain
- Shortness of breath, especially after activity
- Fatigue and weakness
- Skin rash, allergic dermatitis, irritant dermatitis, and rough/scaly skin
- Fever
- Weight and appetite loss
- Rapid heart rate
- Eye, nasal, and respiratory irritation
- Pulmonary damage, blood in the sputum
- Night sweats
- Abnormal lung sounds heard with a stethoscope
- Small lung scars seen on chest X-rays
- Abnormal breathing as shown in pulmonary function tests
- Allergy (sensitization) to beryllium, which is measured in the blood or lung
- Scar called a granuloma, which is found in lung or skin tissue when biopsied and examined

If you develop any of these symptoms you should inform a physician or health care professional of your past beryllium exposure, work environment conditions, health symptoms, environmental exposure records, or any information related to exposure to hazardous substances. Also be certain to request a doctor who specializes in occupational lung diseases.

When could workers be exposed to beryllium?

Workers may be exposed to beryllium while performing the following applications and tasks:

- Ventilation system exhausting contaminants containing beryllium
- Welding, cutting, grinding, and brazing
- Material handling
- Mining applications
- Extraction applications
- Processing applications
- Manufacturing applications
- Assembly and disassembly
- Fabrication
- Beryllium alloy casting
- Carry-home exposure

How do I find out if I have beryllium disease?

Screening for beryllium disease usually begins with a chest X-ray and a beryllium lymphocyte proliferation test (BeLPT) of the blood for beryllium sensitization. The blood test detects abnormalities earlier than other clinical tests such as breathing tests or chest X-rays, and measures how specific white blood cells ("lymphocytes") react to beryllium. A positive test result means that an individual is sensitized.

The BeLPT is not routinely done in most medical laboratories. However, a health care professional may order this test from any laboratory that has overnight courier service to one of the medical research centers listed in the sidebar box.

Testing Laboratory

Specialty Laboratories, Inc.
2211 Michigan Avenue
Santa Monica, CA 90404
P: (800) 421-4449

Medical Research Centers

Cleveland Clinic Foundation
9500 Euclid Avenue, L-15
Cleveland, OH 44195
P: (800) 628-6816

National Jewish Medical and Research Center
Division of Environmental and Occupational Health Sciences
Denver, CO 80206
P: (303) 398-1722

University of Pennsylvania Hospital
Pulmonary Immunology Unit
3400 Spruce Street
Philadelphia, PA 19104
P: (215) 662-6479

How is chronic beryllium disease treated?

The treatment of CBD focuses on the reduction of the lung's inflammatory response to the beryllium particles, thus reducing the chances of lung damage. Treatment is highly effective in controlling the disease, although a complete cure with or without treatment is rare. Beryllium particles imbedded in the skin must often be removed before wounds will heal.

What control measures can be taken to prevent it?

The primary route of beryllium exposure is through the respiratory system, so workers should avoid breathing beryllium particulates, dust, and fumes. The second route of exposure is through the skin, so workers should be certain to wear all necessary protective clothing. The contractor must provide control measures to decrease exposure risks, including:

- Working with non-beryllium metals, alloys, ceramics, and salts
- Modifying or enclosing the process
- Using local exhaust ventilation and working in a well-ventilated area
- Following accepted work practices and proper material handling procedures
- Following good housekeeping protocol
- Reading and understanding material safety data sheet (MSDS)
- Holding informal work task meetings on control measures
- Removing all coatings, oil, residue, or paint before welding, cutting, and brazing
- Training on all issues discussed in this fact sheet and establishing a written prevention program
- Providing warning signs and setting up limited access zones
- Building temporary barriers
- Reviewing OSHA (1910.1000 Table Z-2) and DOE regulations (10 CFR 850)
- Refraining from eating, drinking, and smoking in areas where beryllium is in use
- Wearing protective clothing to cover your entire body
- Maintaining clothing—do not wash work clothes with family laundry; if working with beryllium, have clothes laundered by a service geared toward chemically treated clothing
- Ensuring workplace air monitoring and measurements, as well as surface monitoring
- Conducting exposure assessment
- Conducting medical surveillance
- Keeping exposure, medical exam, and training records that are available to employees and their representatives

- Using vacuum systems in machining operations
- Minimizing the number of workers who have access to areas of potential beryllium exposure
- Using high-efficiency particulate air (HEPA) vacuums to clean equipment and the floor around work areas
- Wearing appropriate personal protective equipment (PPE), air-purifying respirators equipped with 100-series filters (either N-, P-, or R-type) or, where appropriate, powered air-purifying respirators equipped with HEPA filters, particularly in areas where material containing beryllium can become airborne
- Avoiding leaving a film of dust on the floor after a wet mop is used to clean work area

- Avoiding use of long vacuum hoses and looping any hoses used
- Avoiding disabling/disconnecting the vacuum system during a machining operation
- Avoiding use of compressed air when cleaning parts or work surfaces
- Designing work facility for beryllium-related operations

CBD cases have occurred among family members of workers exposed to beryllium. To reduce "carry-home" exposure risks, employers should provide showers, clean work clothes, and clean storage areas for street clothes. Protective clothing should also be provided to employees who work in areas where beryllium-containing materials are used and where there is a potential for spills.

Employers should additionally ensure that employees:

- Change into work uniforms before entering work areas
- Place their uniforms in a labeled bin with a cover at the end of the work shift
- Shower and change into street clothes prior to leaving the facility
- Wash their face, hands, and forearms before eating, smoking, or applying cosmetics
- Keep work clothes as clean as possible during the work shift
- Wipe off their shoes prior to leaving the work area
- Do not wear work uniforms or shoes outside of the facility

What is the DOE CBD program?

The Department of Energy (DOE) has implemented the Energy Employees Occupational Illness Compensation Program Act of 2000, which addresses occupational exposure to beryllium. The program is designed to provide benefits to workers made ill during DOE nuclear weapons production.

The program provides compensation to employees of:
- DOE
- DOE contractors
- DOE subcontractors
- Companies that provided beryllium to DOE
- Atomic weapon developer employers

DOE and the Office of Worker Advocacy will:
- Have independent medical review of panel applications
- Help workers with occupational illness file state worker compensation claims
- Work with contractors and states to facilitate acceptance of these claims
- Work with their advisory committee and other agencies

The statute provides coverage for employees who:
- Contracted chronic beryllium disease
- Was exposed to beryllium at a DOE or beryllium-provider facility
- Is or was disabled or died as a result of this disease

In addition, the program will provide employees who are sensitized to beryllium with regular medical examinations to check for the presence of chronic beryllium disease. Workers who are determined to have been exposed and/or those who suffer from cancer caused by radiation, beryllium disease, or chronic silicosis may be eligible under the statute for a lump sum payment of $150,000 for disability and future payment of medical expenses associated with such illnesses.

For more information, review the following DOE Fact Sheet, visit the DOE website at http://tis.eh.doe.gov/be/, or call the Office of Worker Advocacy at 877.447.9756.

Fact Sheet

United States Department of Energy

Assistant Secretary for Environment, Safety & Health

Office of Worker Advocacy

Energy Employees Occupational Illness Compensation Program Act of 2000

Note: This Fact Sheet summarizes recently passed legislation and does not indicate the availability of benefits. Actual eligibility criteria for this program remain to be defined and will be established by program administrators over the next year. Until that time, claims for benefits cannot be accepted. For a complete copy of the legislation, see http://www.eh.doe.gov/benefits.

Overview

The Energy Employees Occupational Illness Compensation Program Act of 2000 establishes a program to provide compensation to employees of the Department of Energy (DOE), its contractors and subcontractors, companies that provided beryllium to DOE, and atomic weapons employers[1]. The statute provides that covered employees who suffer from a cancer caused by radiation, beryllium disease, or chronic silicosis are eligible for a lump sum payment of $150,000 for disability and payment of future medical expenses associated with that disease (unless other legislation providing an alternative benefit program is enacted prior to July 31, 2001). If the worker is deceased, the lump sum payment will be provided to survivors. The Act also provides that DOE assist workers with other occupational illnesses with filing State workers' compensation claims once agreements to do so have been entered into between DOE and States.

Beryllium-related Disease

An employee of DOE, of a DOE contractor, of a DOE subcontractor, or of a private company that provided beryllium for use by DOE, or such an employee's survivor, is eligible for benefits if the employee:

- was exposed to beryllium at a DOE or beryllium-provider facility;
- contracted chronic beryllium disease; and
- is or was disabled or died as a result of this disease.

In addition, the program will provide employees who are sensitized to beryllium with regular medical examinations to check for the presence of chronic beryllium disease.

Radiation-related Cancers

An employee of DOE, of a DOE contractor, or of an atomic weapons employer, or such an employee's survivor, is eligible for benefits if:

- the employee developed a cancer after beginning employment at a DOE or an atomic weapons facility;
- the employee's cancer was at least "as likely as not" related to this employment, in accordance with guidelines to be developed that are based on a number of factors, including

continued

[1] An *atomic weapons employer* is defined as a private company that processed material that emitted radiation and was used in the production of atomic weapons.

Energy Employees Occupational Illness Compensation Program Act of 2000

the employee's radiation dose, calculations using radioepidemiological tables, the type of cancer, past health-related activities, and other relevant factors; and

- the employee is or was disabled by or died from the cancer.

Silica-related Disease

Employees of DOE and its contractors, or their survivors, who were employed for 250 days or more mining tunnels for use in underground nuclear weapons testing in Nevada or Alaska, are eligible for benefits if the employee developed chronic silicosis and is or was disabled or died as a result (unless, within 180 days after enactment of the bill, the President makes a determination that there is an insufficient basis to include such employees).

Special Exposure Cohort

The legislation establishes a *Special Exposure Cohort* who would receive benefits. Members of this cohort, or their survivors, are eligible for benefits if the employee developed a specified cancer[2] after being employed and exposed to radiation at certain specified DOE facilities and meets other eligibility criteria specified in the Act. These include employees who worked at least 250 days for DOE or its contractors at one of the DOE Gaseous Diffusion Plants (located in Oak Ridge, Tennessee; Portsmouth, Ohio; and Paducah, Kentucky) and employees who were exposed to radiation related to underground nuclear tests at Amchitka, Alaska. Employees at these sites who have cancer, but do not meet all the Special Cohort criteria, can apply under the general radiation provisions described above.

Additional classes of workers can be added to the Special Exposure Cohort based on a recommendation of an independent Advisory Board on Radiation and Worker Health appointed by the President.

Uranium Miners

Certain uranium miners in Colorado, New Mexico, Arizona, Wyoming, and Utah, who have received lump sum payments under the Radiation Exposure Compensation Act (RECA), or their survivors, are entitled to receive an additional $50,000 lump sum payment and payment of future medical expenses for the cancer for which RECA benefits were awarded.

Other Occupational Disease

DOE contractor employees with occupational illnesses that are not covered under the Federal program can apply to DOE's Office of Worker Advocacy for help in obtaining State workers' compensation benefits. Under this effort, DOE would forward a worker's application to an independent panel of physicians appointed by the Secretary of Health and Human Services. The panel would determine whether the employee's illness or death was due to exposure to a toxic substance at a DOE facility. Based on a determination of work-relatedness, the DOE Office of Worker Advocacy could assist the employee with a State claim for benefits, and DOE could, to the extent provided by law, direct a contractor not to contest claims before the State.

October 2000
DOE Office of Worker Advocacy
1-877-447-9756

[2] The law specifies that covered cancers include bone cancer plus the list of cancers in the previously enacted Radiation Exposure Compensation Act (42 U.S.C. 2210 note): leukemia (other than chronic lymphocytic); lung cancer (with certain exceptions); multiple myeloma; non-Hodgkins lymphoma; and primary cancer of the thyroid, male breast, female breast, esophagus, stomach, pharynx, small intestine, pancreas, bile ducts, gall bladder, salivary gland, urinary bladder, brain, colon, ovary, and liver (with certain exceptions).

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SMOHIT Releases New Sign Industry Safety Program and Tool Box Talks on CD-ROM (01/11/2007)

A quarterly newsletter for members of the
Sheet Metal Workers International Association

safety matters

Volume 6, No. 3 / **FALL 2007**

FLIP OVER for ITI Quarterly

Take a Close Look at Close Calls

From the Center to Protect Workers' Rights

A "close call" or accident without injury is easy to shrug off and forget. But, there is a danger in brushing off accidents that don't hurt, harm or damage. When a "close call" happens, it should immediately send up a red warning flag that something was wrong, unplanned, unexpected, and could happen again. The next time it happens, it could result in serious damage, injury or death.

For every accident there are usually several contributing factors, most of which can be controlled. The best way to prevent the reoccurrence of an accident is by looking at those "close calls." By investigating the root causes of an accident, steps can be taken to eliminate the hazard and improve the work system.

Sometimes there are multiple causes for an accident involving: equipment (unguarded machinery), environment (poor lighting or noise level), people (procedures not understood or not followed), or management (allowed shortcuts). Don't rush to judge. Examine the facts and find what's missing. Look for immediate and underlying causes. An immediate cause may be an unsafe condition like a mechanical failure or it could be an unsafe action by an employee. The underlying cause could be poor machine maintenance, a missing guard, a crowded work area or a lack of training.

continued on page 3

Also, in this issue...

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Q&A Corner

By Charles Austin, SMOHIT Industrial Hygienist

PPE as a Last Resort

Earlier this year the AFL-CIO sued the Occupational Safety and Health Administration (OSHA) to force an end to the agency's 10-year stall in issuing a regulation to require employers to pay for personal protective equipment (PPE) that workers need on the job. Just before the matter got to a courtroom, OSHA agreed to do what the law requires.

Q. Just what does OSHA require when it comes to personal protective equipment?

A. Since it was enacted, the law has always required employers to conduct a formal assessment of worksites to determine what kind of equipment is needed to protect workers on the job. Once that assessment is complete, the employer is responsible for providing the necessary equipment and training workers in its use. Of course, workers must use that equipment properly to protect themselves.

Q. So, is all personal protective equipment the same?

A. Not at all. Regulations governing hard hats specify the strength requirements for the shell of a hard hat and how the size adjustment must work.

Or, take the issue of foot protection. Safety shoes and boots provide impact and compression protection for workers who handle heavy materials or work in areas where materials might fall or roll onto feet.

Q. All safety shoes aren't the same?

A. No, various styles and constructions are designed for different conditions. Puncture-resistant footwear incorporates a steel insole to protect against stepping on sharp objects. Conductive footwear minimizes electrical hazards by preventing the accumulation of static electricity, and electrical hazard footwear reduces hazards from contact with electrically energized equipment.

Regardless of the type of footwear that a certain job requires, the fit is also critical. That's why its best to try on safety shoes or boots at the end of a day when feet are slightly swollen; and wear the type of socks that will be normally worn on the job. Many people don't have the same size on both their feet. Measure both feet and make sure that the pair fits the wearer's larger foot.

Eye protection is another example. Although 70 percent of all sheet metal workers wear eye protection, the majority use improper or ill-fitting equipment not suited to tasks performed on the job. That's why we offer a four-hour CD-ROM instruction to demonstrate the causes of accidents affecting the eyes, vision impairment, and how to properly select eye protection based on the specific task.

Q. So, you've got everything you need on the job—goggles, hearing protection, hard-hat, safety shoes, gloves to protect your hands. Now you're superman, right?

A. The dust-up over OSHA's delays on PPE regulations put the spotlight on an issue that is often overlooked by safety professionals. PPE requirements in construction and industrial operations are widely accepted. Many collective bargaining agreements specify the kind of equipment to be supplied and utilized on the job. We're all familiar with the safety glasses, steel-toed shoes and hard hats that are almost universal on construction sites. However, routines and habits sometimes lull folks into complacency—and the use of personal protective equipment can often give people a sense of false security, leading them to either overlook other safety issues, or to assume that their hard hats and boots make them invulnerable.

More importantly, personal protective equipment needs to be viewed as the stuff that we have if and when all else fails. Face it. If a tool is dropped from above, a hard hat is a last-resort protection. The first precaution is to see to it that tools and materials are safely stowed when not in use and don't get dropped.

Investigations of accidents typically find not one single cause, but multiple failures—a cascade of events, one leading to another. The goggles or shoes, fireproof clothes, hard hats and hearing protections are the last line of defense and vitally important. But the first line is to take the precautions and observe the procedures that control the safety environment and stop accidents before they happen.

Take a Close Look *continued from page 1*

All incidents should be reported to the supervisor so that accident/injury report forms can be completed. Once an investigation is completed, solutions should be sought to prevent the accident from occurring again. Solutions may involve engineering controls, administrative controls, additional training, or increased communication between management and workers.

Workers should inspect the work area daily for unsafe conditions or unsafe actions and, if found, report them to the supervisor. Hazard awareness is key to preventing accidents before they happen. Take steps to eliminate hazards as soon as they are discovered. Learn the real lesson from close calls. They can happen again and again until they cause injury, so tell your supervisor about every accident, no matter how minor it may seem at the time. You never know when an incident may be repeated and result in an injury or even death.

SMOHIT participates in and supports the Electronic Library of Construction Occupational Safety & Health (www.elcosh.org), an internet site created by the Center to Protect Workers' Rights (CPWR) to facilitate access to a wide range of advice, information and safety facts. See also: www.cpwr.org.

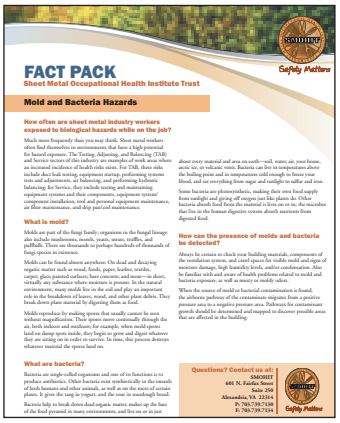
Tool Box Talks: Hand Protection

Sheet metal work is tough on the hands. Potential injuries include the obvious cuts and slashes from sharp edges, massive damage from unguarded moving parts and chemical burns or allergic skin reactions to solvents, abrasives, detergents and other chemicals associated with metal work.

Gloves and guards are standard protections—and workers are cautioned to carefully read Material Safety Data Sheets if they have any questions about substances they use on the job. Whenever you are working, protect yourself against conditions that can cause distractions—such as fatigue and medications—and always use welding gloves when welding or when handling hot materials. Check out www.smohit.org, audio podcasts.

SMOHIT Administrator Gary Batykefer reviews highlights of the fund's activities during 2007 for the Toronto Business Agents meeting.

FACT PACK: Mold & Bacteria Hazards


FACT PACK
Sheet Metal Occupational Health Institute Trust
Safety Matters
Mold and Bacteria Hazards
How often are sheet metal industry workers exposed to biological hazards while on the job?
What is mold?
How can the presence of molds and bacteria be detected?
What are bacteria?
Questions? Contact us at:
SMOHIT
601 N. Fairfax Street
Suite 250
Alexandria, VA 22314
P: 703.739.7330
F: 703.739.7334
Safety Matters

Sheet Metal workers often find themselves in environments with a high potential for hazard exposure. In the Testing, Adjusting and Balancing, and Service Sectors, workers can run into molds and bacteria that present mild to severe health problems by causing allergic reaction, generating toxins or causing respiratory illnesses.

SMOHIT's Mold and Bacteria Hazards Fact Pack describes the typical kinds of mold and bacteria exposures that sheet metal workers can face along with detailed advice on how to reduce or eliminate exposure.

For a copy of SMOHIT's Mold and Bacteria Hazards Fact Pack, go to: www.smohit.org. Click on Communications, then select: Fact Packs.

Podcasts – Electrical Safety

SMOHIT's "Electrical Safety" Tool Box Talk provides a quick and thorough primer on safety procedures that can help workers avoid accidents involving power tools and electricity.

First and foremost, the video advises: Don't try to fix a smoking, sparking or overheated tool. Leave repairs on tools and equipment to trained professionals. When you see sparks or smoke coming off a tool, or feel it getting overheated: discontinue use and get a replacement. The video also warns workers to examine power cords before using them, make sure there are no cuts, crimps or frayed insulation.

When working on electrical equipment, make sure that power sources are securely locked out and properly tagged out. To hear Electrical Safety, go to www.smohit.org, and click on Podcasts.

LAS VEGAS OSHA 500/502 TRAINING ATTRACTS 72

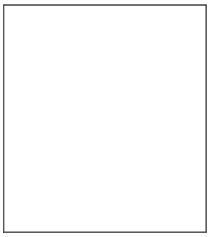
SMOHIT conducted a weeklong session for 72 trainers on OSHA 500/502, June 24th to the 30th. Designed to qualify trainers to teach construction industry safety outreach, the classes were led by SMOHIT Industrial Hygienist Charles Austin, Mike Sloan and Ed Hoganson.

St. Louis Local 36 Business Manager and SMOHIT Trustee David Zimmermann chats with SMOHIT Administrator Gary Batykefer during a break in the Toronto Business Agents meeting in late August.

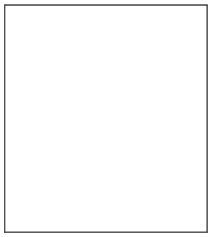
SMOHIT Trustees Continue Building Training Library

Throughout 2007, SMOHIT's trustees have been adding to the training library. Among the products recently released are:

- The PPE Assessment Training Program
- Arc Flash Hazard Safety Program
- Safety Orientation Series Vol. II
- Spanish Safety Orientation Conversion Vol. 1



Michael J. Sullivan
SMWIA
Washington, DC



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Robert Payne
SMOHIT Trustee
Business Manager
Local Union 441
Mobile, AL

TRUSTEES SET 5-YEAR STRATEGIC PLAN

SMOHIT's principals—SMWIA General President Michael J. Sullivan and SMACMA Chairman David E. Norris—and Trustees Leonard Otero, David Zimmermann, Dwight Silvia and Robert Payne met in Las Vegas September 24th and 25th to craft the fund's strategic plan for the next five years. The next edition of Safety Matters will feature highlights of the plan.

UPCOMING DATES FOR ASBESTOS SCREENING

Local 32 will hold an asbestos screening clinic on November 15, 16 and 17 in Miami. An additional screening will be held in the West Palm Beach area also in November. Details are pending.

Plans for asbestos screenings in Hawaii, Phoenix and Oklahoma are also under development. Check the SMOHIT website (www.smohit.org) and click on health services for further details as they become available.

All sheet metal workers who were initiated to journey level status prior to January 1, 1987 and are on minimum dues (if retired) and have not tested positive prior to this screening are eligible.

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United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union

Founded	May 22, 1942
Members	1.2 million (2006)
Country	United States,
Affiliation	AFL-CIO, CLC
Key people	Leo Gerard, President
Office location	Pittsburgh, Pennsylvania

The **United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union** (United Steelworkers or USW) is the largest industrial labor union in North America, and claims over 1.2 million active and retired workers amongst its ranks. Headquartered in Pittsburgh, Pennsylvania, the United Steelworkers represents workers in the United States, Canada and the Caribbean. The United Steelworkers represent workers in a diverse range of industries, including primary and fabricated metals, chemicals, glass, rubber, heavy-duty conveyor belting, tires, transportation, utilities, container industries, pharmaceuticals, call centres and health care.

The United Steelworkers is currently affiliated with both the American Federation of Labor - Congress of Industrial Organizations (AFL-CIO) and the Canadian Labour Congress (CLC), as well as several international union federations.

The current International President of the United Steelworkers is Leo Gerard, who has served as president since 2001.

Growth of the Union

The 46,000 members of the Aluminum Workers of America voted to merge with the budding steelworker union that was the USW in June, 1944.
Eventually, eight more unions joined the USW as well: the International Union of Mine, Mill and Smelter Workers (1967); the United Stone and Allied Product Workers of America (1971); District 50, the Allied and Technical Workers of America (1972); the Upholsterers International Union of North America (1985); the United Rubber, Cork, Linoleum & Plastic Workers of America (URW) (1995); the Aluminum, Brick and Glass Workers Union (ABG) (1996); the Canadian Division of the Transportation Communications International Union (1999); and the American Flint Glass Workers Union (AFGWU) (2003).

In June, 2004, the USW announced a merger with the 55,000 member Industrial, Wood and Allied Workers of Canada (IWA Canada), a major Canadian forestry workers union.

Then in 2005, it announced an even larger merger with the Paper, Allied-Industrial, Chemical and Energy Workers International Union (PACE). The resulting new union adopted its current name after the PACE merger, and currently has 860,000 active members.

In September 2006, the Independent Oil Workers Union of Aruba which represents refinery workers on the Caribbean island of Aruba, affiliated with the United Steelworkers, becoming the first USW union local outside of the U.S. and Canada.

In early April 2007, the BBC announced that the United Kingdom's second-largest trade union, Amicus, was to begin discussions with the USW about a possible merger. If successful, it would create an international "super union" with more than 3 million members, more able to pressure multinational corporations and their managers.

Also in April, 2007, the USW also merged with the Independent Steelworkers Union, adding 1,150 members at Arcelor-Mittal's Weirton, West Virginia steel mill.

Strategic Alliances

In addition to mergers, the USW has also formed strategic alliances with several other unions as well as other groups.
In April, 2005, the USW and the Alliance of Canadian Cinema, Television and Radio Artists (ACTRA) announced that they had formed a strategic alliance to take on the globalization of the culture industry and to address a range of common issues.

In July, 2006, the USW announced a similar arrangement with the United Transportation Union (UTU), to address common issues in the transportation industry, including the globalization of the industry.

In July, 2007, the USW inked yet another strategic alliance with the Canadian Region of the Communications Workers of America.

Beyond its affiliations with other unions, in June, 2006, the USW announced the formation of a Blue-Green Alliance' with the Sierra Club, which is the largest grassroots environmental organization in the United States. The goal of this new partnership is to pursue a joint public policy agenda reconciling workers' need for good jobs with all people's need for a cleaner environment and safer world.

Doug Stephens
Project Manager/Coordinator
Grant Health & Safety Field Operations
United Steelworkers International Union/Nashville Office

Employed with Lockheed Martin at the Oak Ridge Gaseous Diffusion Plant for 30 years as a maintenance mechanic, and was also president of Local 3-288 of the Oil Chemical and Atomic Workers International Union (OCAW).

Attended an OCAW/NIEHS Grant sponsored Train the Trainer class in 1993 and began delivering 29 CFR 1910.120 training to the employees of Lockheed Martin in a Department of Energy nuclear facility.

Served as Vice President of the Tennessee AFL-CIO State Labor Council from 1987 to 1997.

Worked with the Oil Chemical and Atomic Workers International Union (OCAW) in Denver, Colorado as Grant Administrator for the Department of Energy Hazardous Waste Operations and Emergency Response Grant from 1997 until the merger in 1999 between the OCAW and the United Paperworkers International Union (UPIU).

Moved to Nashville, TN in 1999 to become the Associate Director of Health and Safety with responsibility of the NIEHS Grants Programs.

Currently, Project Manager and Coordinator of Grant Health and Safety Field Operations for the United Steelworkers International Union's Nashville Office.

Michael Gill
Grant Administrator
Tony Mazzocchi Center for Worker H&S and Environmental Education
United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union

Grant Administrator for the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union (USW) within the Tony Mazzocchi Center for Worker Health Safety and Environmental Education. He is responsible for the coordination of staff and funding to promote the Health and Safety training of USW members.

Mike was a Chemical Operator for 27 years at the Piketon, Ohio Uranium Enrichment facility prior to joining the International Union's grant staff.

Mazzocchi Health & Safety

Tony Mazzocchi: Upholding the Legacy

Tony Mazzocchi dedicated his life to building a powerful progressive workers movement dedicated to justice, equality, and workplace and environmental safety and health. Therefore, the Tony Mazzocchi Center for Safety, Health and Environment Education (TMC) is committed to providing union-based programs that promote the following worker rights:

- To know about the safety and health hazards with which they work.
- To access all corporate medical and research records related to workplace safety and health.
- To conduct their own independent inspections and investigations of the workplace.
- To act to prevent exposure to identified hazards.
- To have full access, along with community members, to information about the environmental impacts of production.

Through its programs, the Center that bears Bother Mazzocchi's name will assist in empowering workers to act collectively to achieve these aims. It will do so by providing the highest quality of education and training available.

Building on a Solid Foundation

When the USW and its partner, the Labor Institute, founded the Mazzocchi Center, they forged a program with enormous potential and a proud and powerful history. Each partner, the former PACE and USWA, and the Labor Institute brought its unique experience and assets. Combined, Mazzocchi Center partners have one of the most accomplished health, safety and environment training programs in the history of the North American labor movement. ***Since 2000, the Mazzocchi Center partners have provided over one-half million hours of health, safety and environment training for nearly 80,000 workers.***

These trainings have all been conducted by a cadre of over 100 rank and file USW members who have been trained as trainers. The Center has one of the largest and best health, safety and environment staff's in North America. The Labor Institute, a long-time partner specializing in adult and worker education, has developed programs and manuals that have reached thousands of members in many unions. Working with New Perspectives Consulting Group, the Center has a participatory research and evaluation team that has conducted a number of studies on health and safety conditions and the effectiveness of training. All those involved with the Center are fully dedicated to

serving the USW membership and its allies in the community. Currently, the TMC uses a variety of facilities for training including USW's Linden Hall Training Center located south Pittsburgh.

Training Is Very Important, but It's Not Enough

Training is only truly successful when people put it into action. ***The Mazzocchi Center has two "union led, worker driven, company supported" programs that are specifically designed to give workers and managers a structure and tools for that action.*** The Mazzocchi Center aims to translate opportunities to train into opportunities to institute union-based plant-wide programs. Currently, labor and management are implementing these programs at 35 USW worksites involving 17,000 workers. These tools include:

- one or more full-time local union program representatives
- local union and labor-management leadership teams
- trained union trainers from the local union
- TMC developed training and program materials
- an incident and near miss investigation program including trained union and management investigators
- a hazard mapping program
- a lessons learned training program spreading lessons both locally and nationally
- issue-specific campaigns
- a Mazzocchi Center support program and more.

These Mazzocchi Center Health and Safety programs focused on identifying and eliminating hazards are:

Triangle of Prevention (TOP). TOP is for those workplaces where both the local union and management are ready to move directly into a comprehensive program of hazard identification, inspection and systems-based recommendations to eliminate or reduce hazards.

Systems of Safety Initiative (SOSI). SOSI, TOP's sister program, is for workplaces where a step-by-step approach to building a program will work best.

Industry–Specific Programs for Identifying and Addressing Hazards.

The programs strategically identify and present training programs such as Hazard Recognition, OSHA Outreach, Hazmat, Industrial Hygiene and others.

MAZZOCCHI CENTER COURSES

If your local union is interested in finding out more about these or other health, safety and environment training opportunities, contact the USW Health, Safety and Environment Department at safety@usw.org or call 412-562-2581. If you are interested in arranging for any health and safety training program, contact your District Staff Representative; We offer these courses at central locations or at specific workplaces and union halls. *There is no fee dependant on grant funding availability.*

If you're looking for OSHA training the courses available and descriptions are here. If you're looking for "A Union Approach to Health And Safety" the description is available here.

Training the Trainers

A 40-hour train-the-trainer course for new trainers to learn the Small Group Activity Method and specific workbook materials. The new trainers will practice using this small group activity method with their fellow new trainers. Each activity, which usually runs from 30 minutes to one hour, has three common elements: Small Group Tasks, Report-back and Summary. Trainer will learn and practice USW values of training and delivering workbook content.

Target Audience: New Trainers from all USW Industries.

Achieving Chemical Security Through Prevention

This 8-hour course is designed to use the Systems of Safety approach to eliminate or reduce hazards that may be targets for intentional acts of terrorism. The course will use hazard mapping to examine if a workplace is at risk and determine its preparedness. It will use a systems approach to examine ways to lessen our vulnerability to acts of terrorism by applying the PSM Standard to these hazards. Participants will practice using the PSM Standard to prevent and/or mitigate incidents caused by intentional acts.

Target Audience: All USW Industries with Hazardous Materials

Systems of Safety Hazard Mapping

This 8-hour course will allow participants to develop a hazard map to identify and locate hazards which can be targeted for elimination through a cooperative group effort. Systems of Safety are used to analyze th effectiveness of proposed fixes to the identified hazards.

Target Audience: Workers at all USW Industries.

Trazado de mapas de peligros de los Sistemas de seguridad (Systems of Safety Hazard Mapping in Spanish)

This 8-hour course will allow participants to develop a hazard map to identify and locate hazards which can be targeted for elimination through a cooperative group effort. Systems of Safety are used to analyze the effectiveness of proposed fixes to the identified hazards.

Target Audience: Spanish speaking workers at all USW industries.

Annual Refresher Training for Hazardous Waste Operations: Nuclear Fuel Services

This 8-hour course provides workers at the Nuclear Fuels Services site with the required annual 8-hour hazardous waste operations refresher required under 29 CFR 1910.120. The course covers Identifying Hazards through Procedures and Eliminating Them with Systems of Safety, Physical Hazards, review of MSDS, NIOSH Pocket Guide and the DOT Emergency Response Guide. It provides refresher training on control of hazardous materials and uses an actual incident to help the trainee recognize multiple root causes of an incident using a Systems of Safety map.

Target Audience: Hazardous Waste Workers from the Nuclear Fuels Services.

Systems of Safety: Hazardous Materials

This 8-hour course provides an introduction to the Systems of Safety approach. It also includes material using the systems approach on lockout/tagout, noise, MSDS and safety, confined spaces, toxic chemical myths, introduction to logic tree, emergency roles and using systems to eliminate hazards. This course serves as a yearly refresher.

Target Audience: Hazardous waste workers from all USW industries.

Emergency Response and Prevention:Awareness and Operations Level

40-hour course provides training for basic awareness and operations level responders as required under OSHA 1910.120. Some of the topics include: emergency responses, emergency roles, MSDS, NFPA hazard rating system, toxic myths, confined spaces, chemical protective clothing, emergencies and respirators and many others. This training does not qualify you for any level of emergency response activity. To be qualified to respond to an emergency, you are required to complete a specified amount of highly specialized training.

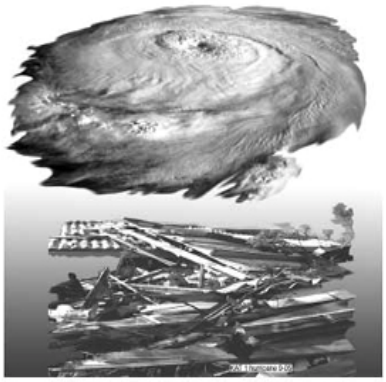
Target Audience: Hazardous waste workers from all USW industries.

Hazardous Materials

This is a 24-hour course for chemical workers for general safety awareness and specifically those who work at Resource Conservation and Recovery Act (RCRA)-permitted Treatment Storage and Disposal (TSD) sites. RCRA companies generate more than 1,000 kg. (about 2,200 pounds or 55-gallons) of hazardous waste per month and store that waste on site for more than 90 days. The material includes information on toxic chemicals, noise, respiratory protection, MSDSs, NIOSH Pocket Guide, reproductive hazards and many more.

Target Audience: Hazardous waste workers from all USW industries.

Basic Health and Safety Training for Devastated Communities



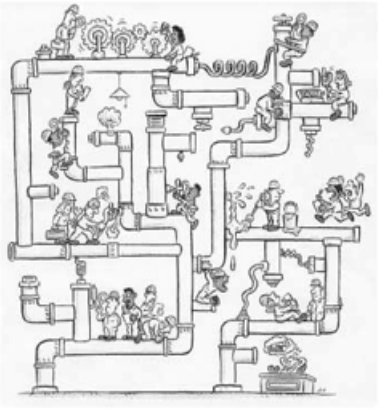
This 8-hour course explores the role of the Government response to disasters in the past and how the Government can best respond to the needs of the Gulf Coast following a hurricane. It also teaches trainees how to recognize the dangers faced when returning home after a hurricane. This course also helps determine if there is anything they can do about this problem and shows how to begin a plan that will make a difference.

Target Audience: People returning to Katrina-devastated homes and the clean-up workers and volunteers helping them.

Process Safety Training

An 8-hour course that acquaints trainees with the basic elements of the Process Safety Management (PSM) Standard and why each plant needs to set up a Process Safety Management (PSM) organizational structure to oversee the implementation of the PSM Standard. The course introduces the concept of systems of safety and accident prevention, allows the trainees to become familiar with the OSHA performance-based requirements for a plant "mechanical integrity" program and examines the causes and solutions of "breakdown" maintenance. Course also touches on conducting accident, incident and near-miss investigations, focusing on root causes.

Target Audience: Hazardous Waste Workers from all USW industries.



Site Emergency Hurricane PSSR Training

8-hour course that uses hazard mapping to allow the trainees to identify and list the hazards present in a normal startup and to identify and examine additional hazards created by a Total Emergency Hurricane Shutdown. The trainees identify the need for new startup procedures to address the unique hazards of total shutdown caused by a hurricane and review a Hurricane Plan to determine if their facility is meeting its standards. They then determine if the plan itself is sufficient and who is the proper authority to make a hurricane shutdown call. During the course the trainees will determine possible ways to organize around pushing this issue.

Target Audience: USW industry worker in hufficane-affected areas

Chemical and Radioactive Hazardous Waste Cleanup

This course consists of two workbooks (Volumes 1 and 2) which can be used to provide 24-hour and 40-hour courses to meet requirements of 29 CFR 1910.120. The course provides a comprehensive hazardous materials training and awareness with small group activities covering hazardous substances and waste problems, toxic chemicals, MSDSs, use of DOT Hazardous Materials Information Systems, *NIOSH Pocket Guide*, medical surveillance, respirator protection and chemical protective clothing, radiation physics, noise exposure, confined spaces, physical and safety hazards, decontamination, drum handling and sampling, health and safety plans and emergency response.

Target Audience: Hazardous waste worker from all USW industries.

DOE Annual Refresher Training for Hazardous Waste Operations

This course provides DOE workers with the required annual 8-hour hazardous waste operations refresher required under 29 CFR 1910.120. The course covers identifying hazards through procedures and eliminating them with Systems of Safety, physical hazards, review of MSDS, *NIOSH Pocket Guide* and the DOT *Emergency Response Guide*. It provides refresher training on control of hazardous materials and uses a actual incident to help the trainee recognize multiple root causes of an incident using Systems of Safety.

Target Audience: Hazardous waste workers from all DOE sites.

Hazardous Waste Operations Emergency Response Hands-On *Also Available as a joint union-management class and train the trainer*

This 32-hour class is designed to address the requirements of OSHA's 1910.120 Hazardous Waste Operations Emergency Response Standard (HAZWOPER). The class elements identify the names of personnel and alternates responsible for site safety and health. It covers safety, health and hazards associated with waste operations and emergency response situations and proper workplace procedures and controls on how to properly deal with these hazards. The participants review selection processes for determining the appropriate PPE needed for the corresponding hazards. An emphasis is placed on best work practices including engineering controls to minimize risks from hazards.

Hazardous Waste Operations Emergency Response 8 Hour Refresher

This 8 Hour Refresher class is designed to address the requirements of OSHA's 1910.120 Hazardous Waste Operations Emergency Response Standard (HAZWOPER). The class elements identify the names of personnel and alternates responsible for site safety and health. It covers safety, health and hazards and how to properly deal with them. The participants review selection processes for determining the appropriate PPE needed for the corresponding hazards. An emphasis is placed on best work practices including engineering controls to minimize risks from hazards.The participants review and practice using the North American Response Guide Boo, NIOSH Pocket Guide, NFPA704 ect.

How to get from here...

Follow in the footsteps of thousands of workers from hundreds of workplaces around North America who have been trained to create a safe and healthy workplace and environment.

Please call today, toll free, to find out how you can be part of this program.
866-222-7349

Or you can e-mail us:
safety@steelworkers-usw.org

TRAINING

TRAINING

...to here

National Institute of
Environmental Health Sciences

Worker Education Training Program

About Worker Education and Training Program (WETP)

General Summary of Training Activities

During the past eighteen years, the NIEHS WETP in conjunction with 20 awardees has supported the development of curricula and initiation of training programs throughout the country to help employers meet Occupational Safety and Health Administration (OSHA) requirements under CFR 1910.120, Hazardous Waste Operations & Emergency Response. This model program encourages innovation for training difficult-to-reach populations by addressing issues such as literacy, appropriate adult education techniques, training quality improvement, and other areas un-addressed directly by the private sector. The program enhances rather than replaces private sector training responsibility by demonstrating new and cost-effective training techniques and materials.

Mission and Objectives

The primary mission of this program is to fund non-profit organizations with a demonstrated track record of providing occupational safety and health education in developing and delivering high quality training to workers who are involved in handling hazardous waste or in responding to emergency releases of hazardous materials.

Mission:

The National Institute of Environmental Health Sciences (NIEHS) was given major responsibility for initiating a training grants program under the Superfund Amendments and Reauthorization Act of 1986 SARA (http://www.epa.gov/region5/defs/html/sara.htm). The primary objective of this program is to fund non-profit organizations with a demonstrated track record of providing occupational safety and health education in developing and delivering high quality training to workers who are involved in handling hazardous waste or in responding to emergency releases of hazardous materials. Since the initiation of the Hazardous Waste Worker Training Program in 1987, the 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.

Objectives:

The major objectives of the program are to prevent work-related harm by assisting in the training of workers in how best to protect themselves and their communities from exposure to hazardous materials encountered during hazardous waste operations, hazardous materials transportation, environmental restoration nuclear weapons facilities, or chemical emergency response, and to undertake brownfields and minority workforce development. A variety of sites, such as those involved with chemical waste clean up and remedial action and transportation-related chemical emergency response, may pose severe health and safety concerns. These are often characterized by the multiplicity of substances present, the presence of unknown substances, and the general

uncontrolled condition of the site. A major goal of this program is to assist organizations with development of institutional competency to provide appropriate model training and education programs to hazardous materials and waste workers.

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EXPERIENCE:

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1990-1998	Program Administrator, Worker Education and Training Program, National Institute of Environmental Health Sciences
1988-1989	Research Director, Clean Water Fund of North Carolina
1987-1988	Coordinator, Utilities Campaign, North Carolina Fair Share
1984-1987	Executive Director, East Coast Farmworker Support Network
1981-1982	Pesticides Project Coordinator, Farmworkers Legal Services Corporation
1980-1981	Consultant, Center for Work and Mental Health, National Institute of Mental Health
1979-1981	Researcher, US Department of Labor, Division for Policy, Evaluation and Research
1977-1979	Director of Education & Training, Carolina Brown Lung Association (CBLA)
1975-1977	Fellow, John Hay Whitney Foundation Research Director, Institute for Southern Studies

HONORS AND AWARDS:

NIH Quality of Worklife Award, 1999

NIH Director's Award, 2000, 2001, 2003, 2004, and 2006

HHS Secretary’s Award for Heroism and Exceptional Service, 2001

HHS Secretary’s Award for Distinguished Service, 2002 (World Trade Center disaster response)

HHS Secretary’s Award for Distinguished Service, 2006 (Katrina disaster response)

NIEHS National Clearinghouse for Worker Safety and Health Training

Working with hazardous waste can be dangerous. The nation has hundreds of thousands of sites to cleanup, and many operating plants and facilities that contain hazardous materials. The National Institute of Environmental Health Sciences' (NIEHS) Worker Education and Training Program (WETP) supports the training and education of workers engaged in activities related to hazardous materials and waste generation, removal, containment, transportation and emergency response. The WETP conducts training through a network of cooperative agreements with nonprofit organizations. The WETP includes basic hazardous waste worker, minority worker, Brownfields, Department of Energy nuclear weapons complex, and national emergency preparedness training components. Since the program's inception in 1987, more than one million workers have been trained.

The National Clearinghouse for Worker Safety and Health Training, funded by the NIEHS WETP, is the national resource for hazardous waste worker curricula, technical reports, and weekly news on hazardous materials, waste operations and emergency response. Operated by MDB Inc., the NIEHS WETP National Clearinghouse supports the efforts of NIEHS WETP staff and grantees in providing health and safety training to workers engaged in activities related to hazardous waste removal, containment, and emergency response. The National Clearinghouse provides the following services for NIEHS WETP staff, program grantees, and the public:

- Facilitates the dissemination of technical information related to the development of safety and health training.
- Arranges, manages and documents NIEHS WETP technical meetings and workshops related to scientific, administrative, and regulatory issues associated with training for hazardous waste workers and emergency responders.
- Develops, analyzes, and compiles NIEHS WETP research products to enhance on-going initiatives, support new training initiatives, and the continuation of program efficiency.

The NIEHS WETP National Clearinghouse Weekly eNewsbrief

The National Clearinghouse weekly eNewsbrief serves as a unique resource for staying abreast on issues surrounding worker safety, health, and training. It features current news articles, research studies, government reports, and upcoming events within the topic areas of emergency preparedness and response, homeland security, environmental cleanup, and chemical safety as they relate to worker training and worker safety. The eNewsbrief is unique for two reasons: it is the only news brief distributed by a federal government agency solely devoted to worker training and safety in the areas mentioned, and it features articles and documents that don't normally make front page news, rather than frontline articles. For more information on how to subscribe to the weekly eNewsbrief, please visit the National Clearinghouse website, *http://tools.niehs.nih.gov/wetp/*.

The National Clearinghouse Health and Safety Library

The National Clearinghouse has compiled massive information related to worker safety and health training into the Health and Safety Library (HASL). The Health and Safety Library has well over 900 reports, guidance documents, and research articles pertinent to the protection of hazardous waste and emergency response worker communities, accessible to the public on the Clearinghouse website, *http://tools.niehs.nih.gov/wetp/*.

The National Clearinghouse Curricula Catalog

This unique provision by the National Clearinghouse is a digital resource that offers the public access to free electronic curricula, in most cases, available for immediate downloading. Currently the catalogue houses over 2,000 files containing curricula material for both hazardous waste and emergency response training developed by NIEHS WETP grantees.

Responding to National Emergencies

Within the National Response Plan, the Clearinghouse is tasked to provide technical information through the Worker Safety and Health Training Annex to the Worker Safety and Health Annex.

The NIEHS WETP responded to the September 11th attacks and the Gulf Coast hurricanes by training workers to undertake cleanup of environmental problems stemming from the disasters.

- In response to the attacks on the World Trade Center, the National Clearinghouse sent personnel to: assist in coordination of NIEHS WETP awardee activities at the WTC site, to assess the safety and health status at the WTC site, to evaluate the site safety and health plans, and to conduct a preliminary assessment of training needs.
- In the immediate aftermath of Hurricane Katrina, the NIEHS WETP, its awardees, and the Clearinghouse developed a PowerPoint Presentation covering the pertinent government guidance available about safety and health hazards. This presentation "Protecting Yourself While Helping Others," was posted on the NIEHS Clearinghouse website, translated into Spanish and Vietnamese by NIEHS grantees, and turned into a pocket guide available in all three languages. Thousands of copies of the pocket guide have been downloaded and distributed.

Following Hurricane Katrina, the Clearinghouse opened a temporary Katrina Field Office in Baton Rouge, LA to provide information related to post-Katrina cleanup to NIEHS awardees, other federal agencies, contractors, workers and the public. The field office acted as a liaison between these stakeholders to facilitate the development of training partnerships.

NIEHS WETP Workshops and Technical Meeting Facilitation

The planning and implementation of NIEHS WETP workshops and technical meetings has always been a significant aspect of the National Clearinghouse operations. After facilitating the workshops, the Clearinghouse documents its proceedings in a workshop report. A large number of essential NIEHS Worker Safety and Health Training documents are products of this workshop process.

Reports on NIEHS WETP Accomplishments

Reports that highlight the accomplishments of the NIEHS Worker Education and Training Programs and its grantees can be downloaded from the National Clearinghouse website.

Research Products

One critical mission of the Clearinghouse has always been to research and analyze breaking issues that may affect hazardous waste and emergency response worker training. This research provides recommendations and guidance for NIEHS WETP and its grantee community in determining the program's direction. The National Clearinghouse has conducted a number of research studies at the request of the NIEHS Worker Education and Training Program that are available online at the NIEHS WETP National Clearinghouse website.

Discover What the National Clearinghouse Has to Offer

Visit the **NIEHS National Clearinghouse for Worker Safety and Health Training** website at *http://tools.niehs.nih.gov/wetp/*.

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Deborah Weinstock joined MDB, Inc. in 2005 as the Director for the NIEHS National Clearinghouse for Worker Safety and Health Training. Deborah comes to MDB, Inc. with twelve years of experience in the safety and health field. Prior to joining MDB, she spent seven years as an Occupational Safety and Health Specialist in the AFL-CIO Department of Occupational Safety and Health. Deborah has experience working with a variety of government agencies and departments, including, the Department of Energy, the Environmental Protection Agency and the National Institute of Environmental Health Sciences. Deborah holds a B.A. degree in Art History from the University of Maryland and an M.S. in Applied Behavioral Sciences from Johns Hopkins University.

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WORKSHOP REPORT

NIEHS
National Institute of Environmental Health Sciences

Worker Education and Training Program

Minimum Health and Safety Training Criteria:

GUIDANCE FOR

Hazardous Waste Operations and Emergency Response (HAZWOPER) HAZWOPER-Supporting and All-Hazards Disaster Prevention, Preparedness, & Response

Based upon
NIEHS/WETP National Technical Workshop — March 30-April 1, 2005

National Clearinghouse for Worker Safety and Health Training
Operated by MDB, Inc. • Washington, DC • 202.331.0060 • www.wetp.org

January 2006

FOREWORD

This document is based upon a National Technical Workshop sponsored by the National Institute of Environmental Health Sciences (NIEHS), Worker Education and Training Program (WETP) conducted on March 30-April 1, 2005 in Los Angeles, CA. It was the third such training quality workshop conducted by the program since its creation in 1987; the initial workshop, conducted in 1990, produced the "Minimum Criteria for Worker Health and Safety Training for Hazardous Waste Operations and Emergency Response" followed by the "Interpretive Guidance" to the Minimum Criteria conducted in 1994. The initial "Minimum Criteria" served as the basis for the non-mandatory Appendix E to the OSHA Hazardous Waste Operations and Emergency Response standard at 29 CFR 1910.120.

This third workshop was conducted to update the "Minimum Criteria" guidance, which has served as the primary quality control foundation for the Worker Education and Training Program for the past 18 years. During that period, however, there have been significant advances in the development and application of advanced training technologies and substantial recent attention to all-hazards preparedness training for the emergency response community since 9/11 and the creation of the Department of Homeland Security.

The workshop was attended by over 110 participants from the WETP, the WETP grantees, and others invited from the public and private sectors. The workshop process included an opening plenary session with two expert panels, six breakout sessions on topical areas from the preliminary draft straw man document, and a closing plenary of reports and discussions of findings and recommendations from each breakout session. A draft workshop report was prepared following the workshop and sent to all participants for review and comment. Based upon the comments received, this final workshop report was prepared and issued.

This guidance document is intended to serve as the quality control basis for the training grants awarded by the Worker Education and Training Program beginning in FY 2006.

TABLE OF CONTENTS

1. INTRODUCTION

Worker safety and health training saves lives. This has been the experience of the Worker Education and Training Program of the National Institute of Environmental Health Sciences, which has trained over a million workers since its beginning in 1987. Its mandate came through the Superfund Amendments and Reauthorization Act of 1986, which also required OSHA to promulgate health and safety standards to protect and train workers engaged in hazardous waste operations. OSHA promulgated a final standard in March 1990 at 29 CFR 1910.120. The Act also established and funded a grants program for the training and education of workers engaged in work covered by that OSHA standard.

The intent of the training grants program was to develop and deliver the highest quality training programs geared to the adult learner. The initial quality control for the program was developed through a participatory national technical workshop in 1990 and issued by the Program in 1991. This original "Minimum Criteria" was updated in 1994 as the "Interpretive Guidance" to the "Minimum Criteria." The 1994 guidance has served as the quality control basis for the WETP training grants program to the present time.

There have been many developments in training since the inception of the grants program in 1987. Advances in training technologies and the emergence of all-hazards preparedness training in the emergency response sector since the terrorist attacks of 9/11 are two specific examples. The Program has, over the years, conducted a number of national technical workshops, such as "Advanced Training Technologies" conducted in 1999, for the purpose of developing additional guidance for the training grants program.

This guidance document, which has been similarly developed through a national technical workshop process, essentially updates the original "Minimum Criteria" to include advances in adult education in the hazardous waste operations and emergency response sector, particularly advanced training technologies application and integration, requirements for additional training programs to support HAZWOPER work, and post-9/11 all-hazards preparedness training including that for skilled support personnel as identified in HSPD#8.

This guidance emphasizes the principles of adult education (Section 8), establishes minimum criteria for designing training programs (Section 9), establishes quality control requirements for training programs (Section 10), and provides generic guidelines for training curriculum (Section 11). The latter addresses the three primary sectors established in the HAZWOPER standard: hazardous waste operations [29 CFR 1910.120 (b)-(o)], RCRA Treatment, Storage, and Disposal (TSD) operations [29 CFR 1910.120(p)], and emergency response operations [29 CFR 1910.120(q)]. In addition, training grant program awardees are required to annually conduct quality control audits and certify that their programs comply with this guidance.

Guiding Principles

The following are broad, overarching principles that frame the more detailed guidance in this document.

1. 29 CFR 1910.120 provides the needed framework for protecting hazardous waste workers and emergency responders. It is the most proactive OSHA standard for protecting workers who respond to disasters, both natural and manmade. In the latter category, OSHA has indicated that terrorist acts involving chemical, biological, radiological, and nuclear weapons would be covered by the standard. Acts involving explosive agents may also be covered, depending on the types of exposures generated by the acts.
2. This guidance is primarily intended for organizations that provide hazardous waste worker and emergency response training under grants from NIEHS, but may likewise prove valuable to any organization that provides similar occupational health and safety training.

3. This document draws upon and references other guidance materials that provide excellent recommendations for training the intended target populations. Of particular note are the National Fire Protection Association guidelines and the FEMA "Guidelines for Haz Mat/WMD Response, Planning and Prevention Training: Guidance for Hazardous Materials Emergency Preparedness (HMEP) April 2003 Edition. The FEMA guidance has been fully adopted by reference in this document.

4. Whenever there is doubt about the appropriate category of training, the more comprehensive and protective should be applied.

5. Peer-to-peer training with hands-on activities is the most effective model for worker training. This guidance recommends that hands-on training should fill at least one-third of the training program hours.

6. Computer-based training methods can greatly augment the effectiveness and reduce the cost of hazardous waste worker training, but should not be the sole form of training when workers' health and safety are at risk especially with respect to skills training.

7. Proven adult-learning techniques should be the core of all worker training.

8. Worker safety and health training must be preceded by a needs analysis to ensure the appropriate knowledge, skills and attitudes are being transmitted. The training must be followed by a proper evaluation to document the knowledge, skills or attitudes were acceptably transmitted and that the worker possesses the necessary abilities to perform the tasks.

9. Post-disaster training must be tailored to the specific hazards presented by each disaster and should be revised as often as significant new hazard information becomes available or the stage of the disaster changes.

10. The original 1991 Minimum Criteria guidance was the basis of the OSHA non-mandatory appendix on training in the 1910.120 standard (Appendix E, Training Curriculum Guidelines). This update of the Minimum Criteria maintains most of the original recommendations; changes are intended to make the original material more clear, relevant, or protective of workers.

2. PURPOSE

The purpose of this document is to establish minimum health and safety training criteria for programs and providers to meet the training requirements established in:

- the Hazardous Waste Operations and Emergency Response standard (29 CFR 1910.120);
- 1910.120-supporting training; and
- all-hazards prevention, preparedness, and response training as defined in the National Response Plan dated December 2004.

In addition, this guidance is intended to help trainers integrate new training technologies and techniques into their programs, improve annual refresher training, and increase the effectiveness of their courses by emphasizing the principles of adult education.

3. SCOPE

These criteria apply to training providers offering training to all training populations established within 29 CFR 1910.120(e), (p)(7) and (8) (iii), and (q)(4),(5),(6),(7), and (8). They likewise apply to all 1910.120-supporting training programs and all-hazards prevention, preparedness, and response training offered by those training providers, based upon the requirement that initial training has been successfully completed in accordance with 1910.120 (e), (p), or (q).

4. APPLICATION

These criteria are applicable to all NIEHS/WETP training grant awardees for all 29 CFR 1910.120 based training, 1910.120-supporting training, and all-hazards prevention, preparedness, and response training for which the Awardee is funded by the NIEHS/WETP.

The criteria are recommended, however, to all other training organizations providing 29 CFR 1910.120 based training as a guide.

5. ORGANIZATION

This document is organized in the following manner:

1. Worker training principles and characteristics of excellence to which all training providers should adhere are presented in Section 8.
2. Minimum training program design criteria, quality control, and curriculum guidelines are provided in sections 9, 10, and 11 respectively, which apply to the initial and refresher training requirements within the HAZWOPER standard at 1910.120 (e), (p), and (q).
3. Annex A provides guidance specific to all 1910.120-supporting training programs. Sections 9 and 10 apply to these programs as well. Such training programs, however, shall for purposes of this guidance not be considered as part of the initial HAZWOPER training programs but as separate training programs.
4. All-hazards training programs exclusively focus on the emergency response [29 CFR 1910.12-(q)] sector and may be integrated into both full time and collateral duty emergency responder training or provided as additional separate training modules or courses subsequent to initial training. Sections 9 and 10 apply to these training programs.
5. Annex C provides (in CD format) the "Guidelines for Haz Mat/WMD Response, Planning, and Prevention Training" developed by FEMA and dated April 2003, which is adopted by reference.
6. Annex D provides planners and evaluators with a checklist of adult education principles.

6. DEFINITIONS

The following definitions apply to this document.

1910.120-supporting training — specialized training for specific hazards at a site covered by the HAZWOPER regulation. This additional training is usually required by an OSHA standard - such as asbestos, lead, confined spaces, blood-borne pathogens, and process safety management – but may cover hazards and issues that aren't currently regulated, such as mold and prevention-based training. (See Annex A.)

All-hazards — includes a broad range of hazardous incidents covered under a declaration of a "nationally significant event" that triggers the National Response Plan (NRP). Although commonly referred to as Weapons of Mass Destruction (WMD), this category encompasses a broader range of hazards in the new NRP, including major natural disasters, chemical, biological, radiological, and explosive incidents. The applicability of the HAZWOPER regulation to natural disasters and explosive events would be determined by OSHA on a case-by-case basis, but the agency has previously confirmed that HAZWOPER applies broadly to chemical, biological, and nuclear incidents.

Certificate — A document stating the successful completion of a training course by a specific individual that is signed by the training provider of the course.

Certification — A written document stating that a training program, curriculum, instructor, or course meets a specified written requirement that is signed by an authorized certifying authority.

Competent — possessing the skills, knowledge, abilities, experience, and judgment required to perform assigned tasks or activities satisfactorily and safely based on criteria from applicable standards. The employer may use a certificate of successful completion of a training course to help determine if obligations have been met to ensure that employees have necessary competencies as established in relevant OSHA standards.

Core training — Initial off-site training as established in 29 CFR 1910.120 (e), (p), and (q).

Demonstration — showing how to properly use equipment or to correctly follow procedures.

Enabling objective — a subordinate learning objective that supports attainment of the overall course objectives. An enabling objective addresses a single topic. There may be more than one enabling objective within a course module.

Hands-on training — training in a simulated work environment under the supervision of trained and experienced instructors that permits each trainee to perform tasks, make decisions, and/or use equipment appropriate to the job assignment for which training is being con ducted.

Initial training — initial off-site training required by the HAZWOPER standard at 29 CFR 1910.120 (e), (p), and (q).

Learning objective — detailed written statements of the goal that is to be achieved through the attainment of desired knowledge, skills, or abilities that can be measured, demonstrated, or observed.

Lecture — an interactive discourse with a class, led by an instructor who is immediately available to address questions and engage in interactive discussion.

May — term used in this document to indicate something is permissible.

On-site training — the initial actual field experience of individuals who recently successfully completed the initial off-site training course. Supervision by a HAZWOPER-trained and experienced supervisor is required and the duration of

such on-site training varies in accordance with the HAZWOPER training category. On-site training is the responsibility of the employer.

Peer reviewed — reviewed by individuals with relevant knowledge, experience, education and training appropriate to the materials being reviewed.

Pre-entry briefing — site-specific briefing required prior to entry and commencement of work at any site covered by the HAZWOPER standard. This is the responsibility of the employer.

Proficient — meeting a stated level of achievement.

Proficiency assessment — the method or methods used to determine that a trainee has acquired the level of achievement in knowledge, skills, and/or abilities specified in the course learning objectives, which may be assessed through written or skills performance methods.

Refresher training — an annual training program for those who have successfully completed the initial off-site training program specific to their HAZWOPER training category or who have been certified as competent by their employer in accordance with the HAZWOPER regulatory requirements.

Shall — term used in the document to indicate something is mandatory.

Should — term used to indicate something is recommended.

Site-specific training — job site specific training, often referred to as a "pre-entry briefing," to acquaint workers new to a job site covered by the HAZWOPER regulation with the site control plan, site hazards, control zones, protective measures required, and the emergency response plan. Site-specific training is the responsibility of the employer.

Skills assessment — the method or methods used to determine that a trainee has mastered the stated level of achievement in skills specified in the training course learning objectives.

Skills demonstration — actual performance of skills specified in the training objectives in the presence of a qualified instructor, using appropriate equipment, facilities, or drill environments.

Technology-enhanced training methods — often referred to as advanced training technologies such as web-based and other computer-based learning methodologies. It is assumed that training programs and instructional staff will utilize and effectively integrate whatever technologies are appropriate to achieve the course learning objectives in a manner that assures training effectiveness and learning retention.

Terminal objective — The training objectives specific to the instructional goals of the course. Individual course modules may have a terminal objective that includes multiple requirements supported by enabling objectives that address a single competency requirement.

Trainee/Instructor ratio — the number of trainees per instructor in a learning activity. The required minimum ratios are specified in Table I in section 9.3.6 of this document.

Training Director — The individual responsible for the overall management of all aspects of a training program.

Training day — eight contact hours. The eight contact hours are for training activities only and do not include breaks or lunch periods. Periodic, brief breaks during the instruction are acceptable to ensure an effective learning environment.

Training hour — sixty actual training contact minutes.

Training hours — the number of training hours devoted to lecture, learning activities, small group work sessions, demonstrations, evaluations, and/or hands-on exercises. Where integrated technology-enhanced single student techniques are utilized the training director shall determine and document the applicable training hours.

Training program — A written document by a training provider that addresses all of the requirements established in section 9 of this document.

Training provider — Any organization providing a training program; this document is primarily focused on organizations that provide training through an NIEHS/WETP training grant.

7. ACRONYMS

ADDIE . . . . . Analysis, Design, Development, Implementation, and Evaluation

ANSI . . . . . American National Standards Institute

CFR . . . . . Code of Federal Regulations

DHS . . . . . Department of Homeland Security

DOE . . . . . Department of Energy

FEMA . . . . . Federal Emergency Management Agency

HAZMAT . . . . . Hazardous Materials

HAZWOPER . . . Hazardous Waste Operations and Emergency Response standard at 29 CFR 1910.120

HSPD . . . . . Homeland Security Presidential Directive

ODP . . . . . Office for Domestic Preparedness

OSHA . . . . . Occupational Safety and Health Administration

NFPA . . . . . National Fire Protection Association

NIEHS . . . . . National Institute of Environmental Health Sciences

NIOSH . . . . . National Institute for Occupational Safety and Health

NRP . . . . . National Response Plan. DHS, December 2004

PPE . . . . . Personal Protective Equipment

PSM . . . . . Process Safety Management (OSHA standard at 29 CFR 1910.119)

RCRA/TSD . . . . Resource Conservation and Recovery Act/Treatment Storage and Disposal

RW I . . . . . Radiation Worker I (Level 1 training course established by DOE standard)

RW II . . . . . Radiation Worker II (Level 2 training course established by DOE standard)

SARA . . . . . Superfund Amendment and Reauthorization Act of 1986

SMART . . . . . Specific, Measurable, Action-oriented, Relevant, and Timely

TSCA . . . . . Toxic Substances Control Act

UTL . . . . . Universal Task List (DHS)

WETP . . . . . Worker Education and Training Program

WMD . . . . . Weapons of Mass Destruction

8. WORKER TRAINING PRINCIPLES AND CHARACTERISTICS OF EXCELLENCE

Applying these principles to the development and delivery of training programs should ensure that the programs are excellent and provide the best possible basis for working in hazardous environments in a safe and healthful manner. The criteria should also help workers participate in reducing the hazards that create such environments. The training provider must recognize and embrace the following characteristics of excellence and principles of adult education to meet the spirit of this guidance document.

8.1 Characteristics of Excellence

The best training programs embody the following characteristics, which should be required of every program offered under these criteria. The programs are:

1. Accurate;
2. Credible;
3. Comprehensive;
4. Clear; and
5. Practical.

8.1.1 Accuracy

Accuracy can be ensured by requiring that the training materials be prepared and reviewed by qualified individuals, updated on a periodic basis, and applied by appropriately qualified and experienced individuals employing appropriate training techniques and methods.

8.1.2 Credibility

Employing educational methods appropriate to adult learners is particularly important for the high-hazard work environment. Credibility is enhanced when instructional staff is experienced in applying the knowledge and skills that they are teaching, establishing a "peer" relationship with the trainee. Excellent programs often include "reality check" learning activities that give trainees the continuing opportunity to measure the relevance of the instructional materials against their own personal experiences.

8.1.3 Comprehensive

Minimally acceptable training programs must cover everything required for someone to work safely in the industry, a requirement that is particularly critical for working with hazardous materials. Providing inadequate information or failing to assure that the trainee has mastered the minimum necessary knowledge and skills can be dangerous to that trainee. Any training under the HAZWOPER standard must be comprehensive rather than simply meeting the minimum number of training hours specified in the standard. For that reason, the criteria are presented in considerable detail in this guidance, recognizing that the fundamental training objective is to achieve acceptable knowledge and skills among trainees already skilled in their trade without any regard for the training duration.

8.1.4 Clarity

Training programs must not only be accurate, believable, and comprehensive, they must also be clear. If the material is understandable only by someone with a college education, then the program will fail many workers. Training materials should be written in the language and grammar of everyday speech for the target audience. Further, training material developers should measure readability levels to assure that the training materials are appropriate for their target audience. They should accommodate a range of different literacy levels and learning styles as discussed in the following Principles of Adult Education.

8.1.5 Practicality

Training programs should present information, ideas, and skills that students see as directly useful in their working lives.

8.2 Principles of Adult Education applicable to HAZWOPER

The vast majority of HAZWOPER students are adults who already possess the knowledge, skills, and abilities to work in their current occupations such as fire fighters, emergency medical support personnel, rail workers, construction workers, chemical process operators, and utility workers. The objective of HAZWOPER training is to provide the additional knowledge, skills, and abilities to permit these workers to safely perform their trade in high-hazard environments. Achieving this requires basing instructional materials, techniques, staff, and setting upon sound and proven principles of adult education that are tailored to the specific target audience.

The following are the basic principles of adult education applied to HAZWOPER and related training programs:

Adults learn best by doing. Knowledge alone is insufficient in the HAZWOPER environment. Workers must also be competent and proficient in the unique skills that are required in such work. Hands-on training, exercises, and proficiency assessment are essential.

The training environment must be conducive to learning. HAZWOPER training has two distinct learning environments: the initial off-site training and the on-site, supervised training. The off-site training must provide the knowledge required to perform the work in the HAZWOPER environment and verify the satisfactory attainment of the related skills. On-site supervised training is intended to verify that the student can safely apply the necessary knowledge and skills in the actual workplace.

New skills should be based upon current skills. The new skills required by a fire fighter, ironworker, or laborer to safely perform their work in a HAZMAT incident or hazardous waste cleanup operation must be constructed on the individual's current occupational skills. Heavy equipment operators, for example, should already be qualified to operate their equipment before receiving training to operate the equipment under the unique circumstances of the hazardous waste cleanup site. This approach greatly facilitates learning, peer interaction, and retention as well.

Adults learn from a variety of learning activities including role playing, case studies, audio-visual presentations, discovery exercises, planning exercises, group discussions, lecture-discussions, report-back sessions, drills and exercises, computer use, web site access, computer simulations, and blended approaches using integrated instructional technologies.

Adult learners need direct experience to apply new skills in the work environment. This principle is the underpinning of the need for the hands-on component of skills training. Scores on a knowledge test are not a satisfactory indication that new skills can be effectively and safely applied in the work setting.

Adults need frequent non-judgmental feedback. Adult learners need to know how they are doing in a manner that is not judgmental. Training must respect students existing knowledge, skill, experiences, and circumstances. Opportunities must be provided for constructive feedback to each student in the training course.

Small group activities are important to adult learners. This approach provides an opportunity for individual learners to share and discuss what they have learned with their peer students as adult learners benefit from the experiences of other participants.

Adult learners respond better when they have the opportunity to learn from their peers. The WETP has recognized the critical importance of peer instructors since the inception of the program, and continues to do so.

Adult learning must be reinforced. The knowledge and skills learned for work in the HAZWOPER environment must be retained to be of value to the student. This is the primary purpose of refresher training, which must include critical skills aspects. Site-specific training and periodic drills also serve as reinforcement mechanisms as newly learned knowledge and skills are applied in an actual or simulated work environment.

Learning methods must consider the learner's technological fluency. Not all adult learners are comfortable or fluent with technology-enhanced training tools, such as computer-based or web-based methods. The students comfort level and fluency with technology must be considered before choosing technology-enhanced instructional methods and also during curriculum design.

Adult education is empowering. The knowledge, skills, and experiences adults gain in educational programs should empower them to improve the conditions under which they work and live.

ANNEX D provides a Checklist for Planners and Evaluators of the principles of adult education.

9. MINIMUM TRAINING PROGRAM DESIGN CRITERIA

9.1 Introduction

The following minimum general criteria apply to all providers of initial and annual refresher training required by the 29 CFR 1910.120 regulations (HAZWOPER), the 29 CFR 1910.120-supporting training programs detailed in Annex A, and all-hazards (termed WMD by WETP) supplemental training programs. The minimum initial and refresher HAZWOPER training curriculum guidelines are addressed in Section 11 of this document.

9.2 Assumptions

The HAZWOPER regulation requires initial off-site training and demonstration of the required minimum competencies in each of three primary categories of work covered by the regulation: hazardous waste cleanup operations, RCRA/TSD, and emergency response. The hazardous waste cleanup operations section of the standard also requires initial on-site supervised training after completion of the initial off-site training program. This is the responsibility of the employer and is not addressed in this guidance.

The required annual refresher training is included in this section and in the Minimum Training Curriculum Guidelines (Section 11) based upon the assumption that if initial training programs are provided, refresher training will be as well. Refresher training may be provided off-site or on-site. Given this assumption, this document recognizes that there are exceptions where training providers may not be the same for the delivery of the various training elements, i.e., 1910.120 core, refresher, 120-supporting, and all-hazards training.

This document does not provide guidance for craft, trade, job classification, or task training. This document is based upon the assumption that all trainees possess the knowledge, skills, and abilities specific to their individual craft or trade prior to entering a HAZWOPER training program. Further, under no circumstances should a worker be allowed to engage in work covered by the HAZWOPER regulation unless he or she has successfully completed the applicable HAZWOPER training and is in possession of the necessary skills and abilities to perform the work assigned. Training programs that also provide trade or craft training must ensure that this training is successfully completed before the worker begins the applicable HAZWOPER course. Under no circumstances shall such training be conducted concurrent with HAZWOPER training or counted toward the required minimum HAZWOPER training hour requirements.

This guidance recognizes that additional standard-specific training may be required for operations covered by the HAZWOPER standard where additional hazards may be present, such as confined spaces. Annex A covers 1910.120-supporting training. The need for all-hazards training has emerged as a result of the 9/11 terrorist attacks, the creation of the National Response Plan, and the issuance of several supplemental training awards by the NIEHS/WETP. Any training provider offering training in these additional 1910.120-supporting and all-hazards training categories must meet the applicable requirements established in this document in Sections 9 and 10.

Refresher training requirements in the HAZWOPER regulations vary to some degree among the three primary HAZWOPER categories. The assumption in this guidance is that written proficiency assessments are required in all annual refresher training and, in those courses where skills proficiency needs to be demonstrated, such shall be included.

The HAZWOPER regulations establish minimum initial training hours for the different work categories and minimum annual refresher training hours for some of these categories. The NIEHS/WETP awardees (and others such as

OSHA and FEMA) have over a decade of experience in providing and evaluating these various training requirements. This experience has led to the conclusion that, for most target populations, the OSHA-required minimum training hours are not adequate to assure the necessary competencies. The objective of training, particularly in the high-hazard HAZWOPER environment, is the achievement of the necessary competencies and not simply completion of the minimum training hours required. OSHA-established minimum training hours must be met, but additional training hours may be required to achieve the needed competencies. This is particularly the case for the emergency response sector when all-hazards modules are added or integrated into the training courses. The following provides a summary of the range of training hours required among the WETP grantees and addressed in the FEMA document (Annex C) to meet the minimum competencies:

TABLE 1

Hazardous waste operations:	
General site worker:	40-80 hours*
Other than General site worker:	24-36 hours*
Update Other than General site worker to General site worker:	16-24 hours*
Refresher, annual:	8 hours
RCRA/TSD:	
Initial:	24-40 hours*
Refresher, annual:	8 hours
Emergency Response:	
Awareness level:	4-16 hours*
Operations level:	8-40 hours*
Technician level:	40-240 hours*
Refresher:	8 hours*
Disaster Site Worker (OSHA 7600):	16 hours

* Upper end of range exceeds OSHA minimum.

Finally, it is assumed that training providers and their instructional staff will use a range of training techniques and methods, including technology-enhanced, that are appropriate to meeting the course training objectives.

9.3 Core Criteria

A written Training Plan shall be prepared, implemented, maintained, and updated as necessary on an annual basis. It shall include the following elements at a minimum.

9.3.1 Training Director

Each training program shall be under the direction of a Training Director who is responsible for the program. The Training Director must demonstrate the capacity for providing leadership, assuring productivity of appropriate worker health and safety training and education programs, and for managing the training programs including

quality assurance and program evaluation. In addition, the Training Director shall have a minimum of two years of worker education experience. The Training Director is also responsible for several specific aspects of the training program, which are identified in the following sub-sections.

9.3.2 Training facility

Training facilities shall have available sufficient resources, equipment, and site locations to perform classroom and hands-on training in a setting conducive to effective learning for each specific course offered and shall have sufficient organization, qualified instructional staff, support staff, and services to conduct such training.

9.3.3 Instructional staff

Instructors shall be deemed competent by the Training Director to instruct specific courses on the basis of:

- documented relevant experience,;
- successful completion of the courses in which they are intended to instruct;
- successful completion of a train-the-trainer program specific to the topics they will teach; and
- an annual evaluation of instructional competence by the training provider.

It is desirable that the same organization provide the courses and train-the-trainer program. To the extent possible, instructors should be experienced in the HAZWOPER category they intend to instruct and be peers of the trainees.

Instructors shall be required to maintain competency by:

- participating in continuing education or professional development programs;
- successfully completing annual instructor refresher training; and
- being re-certified by the Training Director subsequent to an annual review of instructional competency.

The instructor annual refresher shall be devoted to applicable educational techniques, applicable training technologies, new or revised federal standards applicable to the courses being instructed, and hands-on training as appropriate. When new training methods including technologies are introduced into the training program, instructors shall be trained to effectively apply them prior to using them in the courses in which they are instructing.

The annual review of instructor competency shall include, at a minimum, observation by the Training Director or his or her designee of instructional delivery, review and discussion of observations with the instructor, and an analysis of the instructor performance based upon evaluations completed by trainees during the previous year.

Instructors providing instruction in the 1910.120-supporting training programs identified in Annex A and all-hazards training shall be certified competent to offer such instruction by the Training Director utilizing the preceding criteria as guidance. Where required by certain of these supporting training programs, such as asbestos or Construction Safety and Health (OSHA 10), the instructor shall be certified or authorized in accordance with the applicable requirements established by the certifying or authorizing authority.

9.3.4 Training course materials and content

The Training Director shall ensure the review and approval of all course materials and other training aids, including but not limited to course syllabus for each course offered, trainee manuals, instructor manuals, audio-visual aids, enhanced technology methods, handouts, demonstration equipment, hands-on equipment and other such training materials prior to their initial use and as needed thereafter or at least annually. The Training Director shall document the review and approval process.

The Training Director shall also ensure that all written, audio/visual, enhanced technology applications, and proficiency assessment instruments for each course are peer reviewed by technically competent external reviewers or by a standing advisory board established for that specific purpose. These reviewers shall possess relevant expertise and experience in the disciplines appropriate to the course subject. One or more of the reviewers shall be an experienced worker representing those to whom the training is directed.

Training courses shall be developed and updated as necessary to be consistent with the recognized principles of instructional design such as the ADDIE method (Analysis, Design, Development, Implementation, and Evaluation) as discussed in detail in the DOE Systematic Approach to Training manual (DOE-HDBK-1078-94), and addressed in ANSI Z-490.1-2001 (reference 17). Learning objectives shall be developed that are realistic, meaningful, attainable, and measurable based upon guidance such as SMART (Specific, Measurable, Action-oriented, Relevant, and Timely).

Additional references that specifically consider the NIEHS/WETP target audiences can be found in the WETP workshop report "Guidelines for Training in Support of Workplace Safety and Health Programs," November 1998 and in several reports from WETP trainers' exchange conferences, all of which can be found at the National Clearinghouse for Worker Safety and Health Training web site (*www wetp.org*). The Office for Domestic Preparedness provides a useful tool for analyzing delivery methods (called DMAT) and a comprehensive review of the ADDIE method (See ODP's 2003 Blended Learning Approach in Reference 31). The methods used shall be fully documented by the Training Director.

Particular attention should be devoted to the following with respect to course design and content:

a. Characteristics of the training target audience
b. Target audience training needs
c. Course prerequisites, if any
d. Learning objectives, including learning objectives for each course module
e. Analysis and selection of delivery method appropriate to the training target audience and the learning objectives
f. Instructional materials including, but not limited to, an instructor's manual with lesson plans and learning objectives, a trainee manual, training aids, and learning technologies
g. Evaluation methods and criteria for satisfactory completion of the course

9.3.5 Trainees

The program shall assure, to the extent possible, that the trainees recruited are capable of being employed in work involving hazardous waste operations and/or emergency response. If trainees are currently employed in a trade, craft, or specific job/task classification, the program shall assure, and document as appropriate, that they already possess the necessary skills of their trade, craft, or job/task classification. Trainees may be approved by the Training Director through a written justification based upon the requirement that the basic trade, craft, or job/task classification competencies have been or will be achieved prior to commencing HAZWOPER training.

When necessary, the training program shall also have a written policy on the necessary medical clearance for trainees to participate in the course and engage in any required hands-on activities, such as respirator donning and doffing. No certifications of successful completion of the training shall be issued if the trainee is unable to complete all course elements deemed to be essential by the Training Director.

9.3.6 Instructor-trainee ratios

All classroom instruction shall not exceed 25 trainees per instructor. The ratio of students to instructors for hands-on activities is based on the level of attention needed for the protective ensemble being worn: levels A and B require greater scrutiny by the instructor because of the increased risks of falls, heat stress, and claustrophobic reactions (Table 2). Ratios are also applicable to skills demonstrations to assure effective and timely assessments, as well the safety of the trainees. No less than two instructors shall be present during any hands-on training activity that involves the wearing of personal protective or other equipment.

TABLE 2

Ensemble level	Ratio (Trainee/Instructor)
C & D	10:1
A & B	5:1

9.3.7 Proficiency Assessment

9.3.7.1 Initial training

Proficiency shall be evaluated and documented with a written assessment and a skills demonstration developed by the training director and staff to evaluate whether the program achieves its stated objectives. The level of minimum achievement in the written assessment shall be specified in writing by the training director. Students must demonstrate full mastery of the required skills for satisfactory completion of the course. Should a trainee fail to achieve full mastery, remedial actions to assist the trainee may be used, based upon approval and documentation by the Training Director.

The written assessment instrument shall be a minimum of 50 questions relevant to the learning objectives of the course. The written assessment instrument may be administered orally, if deemed appropriate by the Training Director. The methods used shall be documented by the Training Director.

For the performance assessment, the task chosen and the means to rate successful completion must be fully documented by the training director and shall be specific to the training course upon which it is based. The number of skills assessment tasks will, therefore, be based upon the skill requirements of the specific course.

The proficiency assessment methods, regardless of the approaches used, shall be justified, documented, peer reviewed, and approved by the Training Director using generally accepted procedures. The test/performance measures must be reviewed and updated as necessary to reflect any changes in the curriculum and must be approved by the Training Director.

Written assessments designed to meet the above requirements may be conducted using computer-based platforms. However, hands-on skills assessment must be conducted in the physical presence of a qualified instructor using appropriate skills demonstration equipment, facilities, or drill environments.

9.3.7.2 Refresher training

Proficiency shall be assessed by the use of a written assessment and, if appropriate, a skills demonstration approved by the Training Director as appropriate for the specific HAZWOPER class. The level of minimum achievement necessary for proficiency shall be specified in writing by the Training Director. The written assessment may be administered orally, if deemed appropriate by the Training Director. The methods used shall be documented by the Training Director.

There shall be a minimum of 15 questions in the written test. The Training Director shall justify in writing the choice of tasks for skills tests and the means to rate successful completion. The tasks chosen shall be appropriate for the HAZWOPER initial course in which the trainees are certified. Skill assessments shall be conducted in the presence of a qualified instructor. The refresher training proficiency assessments shall be reviewed and updated as necessary to reflect changes in the core and refresher curriculum.

The refresher course proficiency assessments are not required to be peer reviewed and approved. However, when the initial training course curriculum upon which the refresher training is based is revised, peer reviewed and approved, consideration of the relevant subjects to be included in the refresher course shall be considered.

9.3.8 Course certificate

Written documentation shall be provided to each trainee who successfully completes the course of instruction based upon the Proficiency Assessment requirements in 9.3.7 and attendance for the duration of the course. This documentation shall include a signed certificate containing the following information, at a minimum:

a. Name of the trainee
b. Course title indicating the HAZWOPER category to which the course applies
c. Course completion date
d. Statement that the trainee has successfully completed the course
e. Name and address of the training provider
f. Date that annual refresher training is required or statement that such is not required or an expiration date
g. List of the levels of personal protective equipment used by the trainee to complete the course
h. An individualized certificate number

An appropriate laminated wallet-sized or a durable and non-reproducible card with a photograph of the trainee and the above information may also be issued to the trainee by the training provider. Such a card shall include the training certificate number.

For HAZWOPER-supporting training programs or all-hazards training courses, certifications of successful completion of the course shall meet requirements for that course by the applicable regulatory entity. Where no such written certification is required, a certificate shall be issued by the training provider containing the appropriate information using the preceding certificate information listing as a guide.

9.3.9 Record keeping

Student records

The training provider shall maintain records listing:

- the dates courses were presented,
- name and social security number (or other unique identifier) of each course trainee,
- a clear indication of which trainees successfully completed each course, and
- the number of the training certificate issued to the trainee cross-referenced by name, unique identifier, and date of course completion.

The training provider shall maintain records for all initial training, refresher training, 1910.120-supporting training, and all-hazards training for a minimum of five years after the last date that the trainee completed a course by the training provider or as otherwise required by state or federal regulations or requirements. Such records shall be provided to the participant, to an individual designated in writing by the trainee, and to a representative, if mandated by law.

Instructor records

The training provider shall maintain records for instructors that document:

- their qualifications,
- certifications received,
- annual instructor refresher courses taken,
- the professional development programs completed., and
- the annual certification of instructional competency issued by the Training Director.

9.3.10 Program quality control

The Training Director shall develop and maintain a written Quality Control and Evaluation Plan. At least annually, the Training Director shall conduct or cause to have conducted a program quality control audit based upon that plan, which shall be in writing. Program modifications to address identified deficiencies, new standards or regulations, or new training methods shall be documented, approved, and implemented. The audit and program modifications documents shall be maintained by the training provider. Program quality control audits shall follow the criteria included in the next section "Training Program Quality Control Criteria."

The Training Director shall provide in a timely manner whatever information and documentation may be requested in the course of an NIEHS/WETP audit.

10. TRAINING PROGRAM QUALITY CONTROL CRITERIA

10.1 Introduction

The criteria that follow should be used as an audit checklist by training providers, training directors, and others, such as the NIEHS grantee peer review audit teams. The factors listed in this section for determining the quality and appropriateness of training are applicable to 1910.120 courses, 1910.120-supporting courses (Annex A), and all-hazards courses.

10.2 Training Plan

A written plan is critical for developing effective training and must consider every step of the curriculum development process: the curriculum analysis, design, development, implementation, and evaluation. The plan must also consider instructor training, training materials and aids (both instructor and trainee), and teaching methods. Auditors of the program should review the following:

- The written Training Plan;
- The title of the courses, the 1910.120 training category that each course addresses, duration of training, course content, and course schedules;
- Training and qualifications of the assigned instructional staff;
- Course syllabus;
- Course prerequisites;
- The training needs of the target audience (based upon a "needs assessment");
- Course design including considerations of adult education principles, the characteristics of

  the target audience, instructional strategies and media, and the basis for the learning methods chosen particularly with respect to the integration of new instructional technologies and techniques;
- Learning objectives, for the course and for each module;
- Course development process including appropriate technical input, external review, evaluation, and documentation;
- The instructional methods, including demonstrations and hands-on activities;
- Monitoring of student safety, progress, and performance during training;
- The assessment process, including pre-testing (if employed), written tests, and skills tests including acceptable levels of performance; and
- The evaluation process and implementation of the modifications required.

10.3 Training Program Management

The management of the program should also be evaluated to see how well the organization delivers training, using the following criteria:

- The Training Director's leadership in assuring quality of health and safety training;
- Competency of the staff to meet the demands of delivering high quality HAZWOPER, HAZWOPER-supporting, and all-hazards training;
- Clear lines of authority, responsibility, and accountability including clearly defined staff duties particularly the relationship of the training staff to the overall program;
- Appropriateness and adequacy of the training methods used by the instructors;
- Instructor competency in applying all instructional methods including newly introduced instructional technologies;
- Documented assessments of learning effectiveness and retention for specific teaching methods;
- Sufficiency of the time committed by the Training Director and staff to the training program;
- Ratio of instructor to trainees by instructional method (classroom, hands-on, skills assessment, etc.);
- Availability, appropriateness and commitment of human and equipment resources;
- Management controls including management of collaborators, consultants, and contractors; and
- In the case of multiple-site training programs, adequacy of the management of the satellite centers, including back-up plan for off-site training.

10.4 Training Facilities and Resources

The adequacy and appropriateness of the facilities and resources for supporting the training program should be considered including:

- Space and equipment to conduct training;
- Facilities for hands-on training;
- In the case of multiple-site programs, equipment and facilities at the satellite centers.
- Equipment, technical support, and resources for enhanced technology training.

10.5 Instructional Technologies

There has been a dramatic expansion in the use of new instructional technologies for safety and health training. The WETP awardees have been at the forefront of pioneering these technologies for worker training and evaluating the results. They conducted two national workshops to develop guidance, which should be used as the initial basis for evaluation. The reports, NIEHS/WETP "Hazwoper Training: Utilizing Advanced Training Technologies" Workshop report (8) and the "Development of an Integrated WETP ATT Program: Final Report" (9), can be found at www.wetp.org. The quality and effectiveness of training programs when utilizing such technologies should be considered including:

- What impact will new training technologies have on the achievement of learning objectives?
- What is the ability of the training target audience to effectively respond to and use such technologies?

- Does the application of new training technologies enhance the learning experience? How? Is it documented? Has retention been evaluated?
- Have training objectives been modified subsequent to the introduction of new training technologies? If so, how well have the new objectives been assessed? Have the results of such assessments been applied to the training program?
- Where self-paced, computer-based learning methods have been applied, what approaches have been used to assure the students attain the knowledge and skills specified in the course learning objectives?
- Where self-paced, computer-based methods have been applied to skills objectives, how has the required skills proficiency been assessed? How have applicable training hours for such methods been determined and applied?
- Has the training provider assigned the necessary personnel and support for a successful introduction of new training technologies?
- Has the training provider effectively and seamlessly integrated new training technologies?

10.6 Quality Control Program Assessment

The written quality control and evaluation plan should consider the adequacy and appropriateness of:

- the advisory committee and/or outside reviewers to provide overall technical policy guidance;
- the competency and role of the advisory committee and outside reviewers;
- the minutes or reports of the advisory committee or outside reviewers meetings or written recommendations;
- instructor performance;
- course evaluations, including feedback, updating, and corrective action;
- the disciplines and expertise being used within the quality control and evaluation program; and
- the role of trainee evaluations to provide feedback for training program improvement.

10.7 Annual Update

The Training Director should ensure there is an annual update to the written quality control and evaluation plan. The annual update provides an opportunity to consider how well the program has:

- included all applicable regulatory changes;
- implemented course updates that have occurred during the preceding year.
- integrated new training technologies;.
- integrated modules among HAZWOPER, HAZWOPER-supporting, and all-hazards training course; and.
- documented the course approvals that are the responsibility of the Training Director as specified in this document.

10.8 Trainees

Adequacy and appropriateness of the program for accepting trainees should be considered including:

- assurance that the trainees already possess the necessary knowledge and skills of their trade, craft, or job classification including documentation that basic skills training has been satisfactorily completed prior to HAZWOPER training;
- methods the program uses to ensure that recruits are capable of satisfactorily completing the course;
- compliance with the medical clearance policy; and
- methods the program uses to ensure that recruits are able to use new training technologies, where required.

10.9 Instructional environment and administrative support

The institutional environment for the training program should be considered for the adequacy and appropriateness of:

- the institutional commitment to the worker-training program,
- the administrative structure and administrative support,
- the financial resources to support the training program, and
- the instructional technology infrastructure.

10.10 Program evaluation

Key questions for evaluating the quality and appropriateness of an overall training program should include the following:

- Are the program objectives clearly stated?
- Is there evidence that the program is accomplishing its objectives?
- Are appropriate facilities and staff available and committed to the program?
- Is there an appropriate mix of classroom, demonstration, and hands-on training?
- Where new training technologies have been integrated into the program, has the impact on and value to the program been assessed?
- Is the program providing quality worker health and safety training that fully meets the intent and requirements of the applicable regulations?
- What are the program's strengths?
- What are the program's weaknesses?
- What is recommended to improve the program?
- Are they instructing according to their training outlines?
- Is the evaluation tool current and appropriate for program content?
- Are the course materials current and the delivery methods relevant to the training target audience?
- Are the measures of program outcome adequate?

11. GENERIC MINIMUM TRAINING CURRICULUM GUIDELINES

The following guidelines are for those operations specifically identified in OSHA regulations 29 CFR 1910.120 as requiring training. The guidelines in the following sub-sections indicate the required minimum competencies that must be demonstrated by the trainees taking the indicated course. The training provider is responsible, in accordance with section 9.0 of this document, for the conduct of the needs assessment and development of the appropriate learning objectives, course curriculum, course modules, and associated training materials required to achieve these competencies for the target audience.

11.1 Hazardous waste operations [1910.120(b)-(o)]

11.1.1 Introduction

This section applies to the core off-site training required by the OSHA HAZWOPER standard at 1910.120(e) applicable to clean-up operations for general site workers and other than general site workers (occasional workers) including the required annual refresher training for general site workers. It does not apply to the required initial on-site training, subsequent to initial off-site training, or to the site-specific training required before entry onto a site as these are the responsibilities of the employer. Hazardous waste cleanup managers and supervisors require initial training and three days on-site supervised experience plus an additional eight hours of specialized training at the time of job assignment and annual refresher training. This section does not address managers and supervisors training, although the initial off-site general site worker course may largely meet the needs of the initial 40 hour training program for such personnel.

Additional training may be required if hazards that are covered by separate regulations are present at a site. Annex A describes a number of such programs that are termed 1910.120-supporting training programs. Of importance, while these supporting training programs may be certified or accredited by another authority, the requirements in this document apply to those programs as well, if they are funded under a NIEHS/WETP training grant award. These training programs are considered to be in addition to the core and refresher courses. This also applies to the all-hazards preparedness and response training in which a number of the awardees are engaged. These programs are considered to be training courses in addition to the initial and refresher courses.

11.1.2 Initial training

Curriculum for hazardous waste operations, required by OSHA 29 CFR 1910.120(e), shall address the following minimum competencies established by OSHA and the additional listed competencies and shall be taught in a minimum of 40 hours. The standard also provides for the initial off-site training of occasional site workers, which shall be a minimum of 24 hours. Such programs shall include the appropriate training objectives for the competencies required in the initial general site worker course tailored to the job assignment of the occasional worker. This reduction in hours is only acceptable to OSHA if workers are not exposed above the exposure limits. Should an occasional worker be up-graded to a general site worker, an additional 16 hours of off-site instruction is required, addressing curriculum topics needed to complete the full 40-hour curriculum. This guidance recommends that the up-grade training encompass a minimum of 24 additional hours.

11.1.2.1 General Site Workers

The initial off-site general site worker training course shall be a minimum of 40 training hours in duration, shall devote a minimum of one-third of the training hours to hands-on training, and shall be of sufficient detail that trainees can demonstrate competency in the following topics:

a. The HAZWOPER standard requirements
b. Health hazards
c. Safety hazards and safe work practices and procedures*
d. The rudiments of confined spaces hazards and entry restrictions (Additional training is required for entry).
e. Emergency response plan and procedures
f. Materials handling procedures and equipment*
g. Sampling procedures, precautions, and applications*
h. Sample collection, monitoring, handling, packaging, and shipment*
i. Respiratory protection including program requirements and selection, use, care, and limitations*
j. Personal protective ensembles (Levels A, B, C, and D) and selection, use, care, and limitations*
k. Decontamination principles, practices, and procedures*
l. Worker rights and responsibilities
m. Medical surveillance requirements
n. Monitoring requirements, monitoring instruments, their limitations and demonstration of competency with instruments trainees may be required to use*
o. Site Safety and Health Plans
p. The Hazard Communication standard and its requirements and purpose
q. The information that is to be provided to the worker upon initial site entry

*Should include a hands-on component.

11.1.2.2 Occasional Workers

Occasional workers, as defined in the HAZWOPER standard, are on site only infrequently and then only for a specific, limited task. The standard further presumes that such workers are not exposed in excess of the applicable exposure limits and are not, therefore, required to wear respiratory protection. Initial off-site training of 24 hours duration and one day on-site supervised training is required. The OSHA standard provides no guidance as to the competencies required for such workers. The standard does state, however, that workers who upgrade to full-time workers or who are subsequently required to wear respirators shall be provided an additional 16 hours of training and two days of on-site supervision. The upgraded training shall essentially encompass the competencies required in the 40-hour full time general site worker course.

For training providers offering "occasional worker" training, the course should address the applicable competencies required for the general site worker excluding those competencies clearly associated with the OSHA-stated reason for a required upgrade, such as respirator wear.

Providers offering the upgrade training must address all of the competencies required for the general site worker and an additional eight hours of training specific to the competencies required in the initial 24 hour occasional site worker course for a total of 24 hours of upgrade training.

The 24-hour occasional worker curriculum should address the following subject areas for which learning objectives sufficient to permit demonstration of competencies must be developed:

a. Health hazards
b. Safety hazards
c. Confined spaces: awareness
d. Emergency response: overview
e. Respiratory protection: awareness
f. PPE: awareness
g. Decon: awareness
h. Rights and responsibilities
i. Medical surveillance
j. Site safety and health plans
k. Hazard communication standard
l. Minimum of six hours of hands-on or demonstration activities

11.1.3 Annual refresher

General site workers and supervisors must have a minimum of eight hours of annual refresher training. A needs assessment should be done prior to, or during, the initial hour of the refresher training to identify any deficiencies in skills or knowledge that the class may have. The 8-hour off-site annual refresher training required by OSHA at 1910.120(e)(8) for general site workers and for supervisors shall be conducted only by training programs offering the initial course. The course content shall include, at a minimum, a core curriculum established for the 8-hour refresher training required by 1910.120(e)(8), based upon the initial general site worker course.

Individuals developing the refresher course curriculum should:

- Review and retrain on relevant topics covered in the 40-hour course using reports by the trainees of their relevant experiences during the preceding year to facilitate the review. Relevant topics may include essential safety and health aspects such as PPE, respiratory protection, decontamination, site safety and health plans, and topics identified in lessons learned reports. These topics may also be extrapolated from OSHA standards interpretations, national statistics, journal articles and/or major incidents that may apply by the instructor.
- Update materials covered in the initial course, including new technologies used in hazardous waste clean-up, task changes, and subject matter that applies to increased worker protection.
- Review changes to pertinent provisions of RCRA, SARA, and the Toxic Substances

Control Act (TSCA) and to pertinent OSHA standards. The review may be presented alone or integrated into other subject matter. If the latter approach is taken, workers must be advised of the provision update.

- Introduce additional subject areas including topics that affect worker health and safety that may not have been covered in the initial 40-hour training program, such as blood-borne pathogens and emerging all-hazards issues.

- Provide hands-on opportunities for new developments in personal protective equipment, such as new or altered donning/doffing procedures for respirators and new decontamination procedures for protective garments.
- Review newly-developed monitoring equipment including lecture/demonstration and hands-on training as appropriate. The operating principles, capabilities, and limitations should be addressed.

A minimum of two-hours of hands-on, or demonstration activities, is recommended.

11.1.4 On-site considerations

The HAZWOPER standard requires that general site workers be provided off-site initial training of a minimum of 40 hours before being allowed to work on such sites and that they be provided 3 additional days of supervised instruction by a HAZWOPER-trained and experienced supervisor on-site. For occasional workers, 24 hours off-site initial training and 1 day on-site supervised training is required. The purpose of this on-site training is to assure that the worker has mastered the required knowledge and skills, has the abilities to perform the required work safely and understands the limitations imposed by the "occasional site worker" designation. This on-site training is the responsibility of the employer.

To aid the employer in tailoring on-site supervised training, the training provider should make available a detailed initial course outline to the employer.

11.2 RCRA/TSD [1910.120(p)]

11.2.1 Introduction

29 CFR 1910.120(p)(7) and (8)(iii) establish the requirements for training of employees of employers conducting operations at treatment, storage, and disposal (TSD) facilities. 1910.120(p)(7) establishes a requirement for a minimum of 24 hours of initial training, but no competencies are listed. Eight hour annual refresher is also required. 1910.120(p)(8)(iii) requires "training for emergency response employees" and lists several competencies that are to be achieved. Not all employees are required to be trained to the degree specified in the standard if the employer segregates the emergency response function between an adequate number of employees to control an emergency and others that are trained at the awareness level to recognize an emergency, summon fully trained emergency response personnel, and take no actions to control the incident.

For purposes of this section, all TSD employees are assumed to be required to have the specified initial and refresher training at 1910.120(p)(7). The following "initial off-site" and "initial on-site" competencies must be addressed in such courses.

Emergency response employee training covered under 1910.120(p)(8)(iii),must address the applicable competencies specified in section 11.3, but tailored to the individual TSD site.

11.2.2 Initial training.

Initial TSD worker training includes an off-site and on-site component, each of which is addressed separately in the following sub-sections.

11.2.2.1 Initial Off-Site Training

The initial off-site training course required in paragraph (p) of 1910.120 for the 24-hour training program, including a minimum of 8 hours of hands-on training, shall enable trainees to demonstrate competency in the following areas:

a. The applicable paragraphs of 29 CFR 1910.120 and the elements of an employer's occupational safety and health program
b. Relevant hazards such as chemical, biological, and radiological exposures; fire and explosion hazards; thermal extremes; and physical hazards
c. General relevant safety hazards including those associated with electrical hazards, powered equipment, lockout procedures, vehicular operations, and walking-working surfaces
d. Confined-space hazard recognition and related procedures
e. Work practices to minimize employee risk from workplace hazards
f. Emergency response plan and procedures including first aid that meets the requirements of paragraph (p)(8) of section 1910.120
g. Procedures to minimize exposure to hazardous waste and various types of waste streams, including the materials handling program and spill containment programs
h. The hazard communication programs meeting the requirements of 29 CFR 1910.1200
i. Medical surveillance programs meeting the requirements of 20 CFR 1910.120(p)(3) including the recognition of signs and symptoms of overexposure to hazardous substances and known synergistic interactions
j. Decontamination programs and procedures meeting the requirements of 29 CFR 1910.120(p)(4)
k. The employer's requirements to implement a training program and its elements
l. The criteria and programs for proper selection and use of personal protective equipment, including respirators
m. The applicable appendices to 29 CFR 1910.120
n. Principles of toxicology and biological monitoring as they pertain to occupational health
o. The rights and responsibilities of employees and employers under OSHA (including 1910.120[p]) and RCRA
p. Hands-on exercises and demonstrations with equipment to illustrate the basic principles that may be used during the performance of work duties, and donning and doffing of PPE
q. Reference sources, efficient use of relevant manuals, and knowledge of hazard coding systems, including information contained in hazardous waste manifests
r. The job skills required before employees are permitted to participate in or supervise field activities. Each employer has the responsibility to ensure that additional job-specific training is provided following the basic health and safety training.
s. Air monitoring methods and equipment. This should include discussions of how to evaluate monitoring results provided by outside consultants.

11.2.2.2 Initial On-Site Training

The employer shall provide hazardous waste workers with information and training as required by 29 CFR 1910.120(p). This training shall be conducted prior to employees' initial assignment into a work area, be appropriate to their potential for exposure, and shall cover the following topics:

a. The emergency response plan and procedures including first aid meeting the requirements of paragraph (p)(8) of 1910.120
b. A review of the employer's hazardous waste handling procedures including the materials handling program and elements of the spill containment program, location of spill response kits/equipment, and names of those trained to respond
c. The hazard communication program meeting the requirements of 29 CFR 1910.1200
d. A review of the employer's medical surveillance program meeting the requirements of 29 CFR 1910.120(p)(3), including the recognition of signs and symptoms of exposure to relevant hazardous substances and known synergistic interactions
e. A review of the employer's decontamination program and procedures meeting the requirements of 29 CFR 1910.120(p)(4)
f. An overview of the employer's training program (meeting the requirements of 1910.120[p][7]) and the parties responsible for that program
g. A review of the employer's personal protective equipment and respirator programs including the proper selection and use of PPE based upon specific site hazards
h. All relevant site-specific procedures addressing potential safety and health hazards
i. Safe use of engineering controls and equipment on site
j. Names of personnel and alternates responsible for site safety and health

11.2.3 Refresher Training

The HAZWOPER standard requires a minimum of eight hours of annual refresher training. However, the standard is silent with regard to the content of such refresher training. An effective RCRA/TSD refresher-training curriculum should consider the following points and must include a hands-on module:

a. An initial needs assessment to identify deficiencies in skills or knowledge that the class may have
b. Lessons learned, if any
c. Review of TSD site-specific critical elements of the initial training course
d. Update of materials in the initial training course, as appropriate
e. Review of any pertinent regulatory changes
f. Review of new technologies applicable to TSD operations, new monitoring methods and equipment
g. Hands-on review of skills essential to worker protection and revisions to procedures associated with their use, such as respirators and chemical protective clothing.

11.3 Emergency Response [1910.120(q)]: Full time

11.3.1 Introduction

The Emergency Response section of the HAZWOPER standard, 1910.120(q), applies to the response to hazardous substance releases without regard to location, and includes hazardous substances, biological, chemical, and nuclear materials. The response function categories are awareness level, operations level, technician level, hazardous material specialist, and on scene incident commander. Increasingly, response with respect to acts of terror, termed WMD, is being seamlessly integrated into emergency response training programs. The last version of NFPA 472 applicable to emergency responder competencies is one example.

The emergency response groups to which the training provisions of 1910.120(q), or the identical section of the EPA standard at 40 CFR 311 for emergency response personnel not covered by the OSHA standard, apply include but may not be limited to the following:

- Full-time career fire service personnel,.
- Paid part-time fire service or emergency personnel,
- Unpaid part-time fires fighters or emergency personnel,
- Full-time fire service personnel who are organized as industrial fire brigades and/or hazardous materials teams,
- Police officers (municipal officers, sheriffs, public safety officers, state troopers, etc.), and
- Emergency medical services personnel.

For purposes of this document, these emergency response groups are considered "full time" emergency responders and are assumed to already possess the knowledge, skills, abilities, and judgment appropriate to their job classification.

11.3.2 Initial training

Full time emergency responders as defined in the OSHA standard at 1910.120(q) and detailed in the preceding section shall be trained in accordance with their duties or function in a hazardous substances response. Specific training categories appropriate to the NIEHS/WETP training grants program, based upon role and function in such a response are:

- First responder awareness,
- First responder operations,
- Hazardous materials technician,
- Hazardous materials specialist,
- Incident commander, and
- Emergency medical services (EMS).

The training competencies required for each category are different as are the times required to meet those competencies. The following guidelines establish the minimum competencies that must be objectively demonstrated by the trainee for each of the specific training categories listed above. These competencies are taken verbatim from the OSHA standard at 29 CFR 1910.120(q)(6). Of key importance to this guidance, The FEMA "Guidelines for Haz Mat/WMD Response, Planning, and Prevention Training" April 2003 edition is hereby

adopted by reference. That document lists the minimum required competencies and suggested learning objectives in each responder category as established in the HAZWOPER standard and provides other recommended competencies based upon the latest addition of NFPA 472 and 473. For each responder category, the training provider shall review the recommended additional competencies and suggested learning objectives in the FEMA Guideline document and adopt those that are applicable to the training providers target audience and responder category. The Training Director shall approve, document, and maintain these courses.

a. **First responder awareness level, 1910.120(6)(i):**

Must be able to objectively demonstrate competency in the following:

- An understanding of what hazardous substances are, and the risks associated with them in an incident.
- An understanding of the potential outcomes associated with an emergency created when hazardous substances are released.
- The ability to recognize the presence of hazardous substances in an emergency.
- The ability to identify the hazardous substance, if possible.
- An understanding of the role of the first responder awareness individual in the employer's emergency response plan including site security and control and the U.S. Department of Transportation's Emergency Response Guidebook.
- The ability to realize the need for additional resources, and to make appropriate notifications to the communications center.

b. **First responder operations level, 1910.120(q)(6)(ii)**:

Must be able to objectively demonstrate competency in the following:

- Awareness level competencies
- Knowledge of basic hazard and risk assessment techniques
- Know how to select and use proper personal protective equipment provided to the first responder operations level.
- An understanding of basic hazardous materials terms.
- Know how to perform basic control, containment and/or confinement operations within the capabilities of the resources and personal protective equipment available with their unit.
- Know how to implement basic decontamination procedures.
- An understanding of the relevant standard operating procedures and termination procedures.

c. **Hazardous materials technician, 1910.120(q)(iii):**

Must be able to demonstrate competency in the following:

- Operations level competencies.
- Know how to implement the employer's emergency response plan.
- Know the classification, identification and verification of known and unknown materials by using field survey instruments and equipment.
- Be able to function within an assigned role in the Incident Command System.

- Know how to select and use proper specialized chemical personal protective equipment provided to the hazardous materials technician.
- Understand hazard and risk assessment techniques.
- Be able to perform advance control, containment and/or confinement operations within the capabilities of the resources and personal protective equipment available with the unit.
- Understand and implement decontamination procedures.
- Understand termination procedures.
- Understand basic chemical and toxicological terminology and behavior.

d. **Hazardous materials specialist, 1910.120(q)(iv):**

Must be able to demonstrate competency in the following:

- Technician level competencies.
- Know how to implement the local emergency response plan.
- Understand classification, identification and verification of known and unknown materials by using advanced survey instruments and equipment.
- Know the state emergency response plan.
- Be able to select and use proper specialized chemical personal protective equipment provided to the hazardous materials specialist.
- Understand in-depth hazard and risk techniques.
- Be able to perform specialized control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available.
- Be able to determine and implement decontamination procedures.
- Have the ability to develop a site safety and control plan.
- Understand chemical, radiological, and toxicological terminology and behavior.

e. **Incident commander. 1910.120(q)(v):**

Must be able to demonstrate competency in the following:

- Operations level competencies.
- Know and be able to implement the employer's incident command system.
- Know how to implement the employer's emergency response plan.
- Know and understand the hazards and risks associated with employees working in chemical protective clothing.
- Know how to implement the local emergency response plan.
- Know the state emergency response plan and of the Federal Regional Response Team.
- Know the importance of decontamination procedures.
- Several additional requirements within 29 CFR 1910.120(q)(3)(i-ix) may be applicable as well in developing the learning objectives specific to the above competency requirements.

f. **Emergency medical services (EMS):**

The HAZWOPER standard lists no competency requirements for EMS personnel participating in a hazardous materials response beyond the general duty to properly train individuals to perform their assigned role in a hazardous materials emergency. The FEMA guideline provides recommended training competencies and learning objectives for EMS level 1 and 2 personnel based upon NFPA 473. Training providers who offer courses for EMS level 1 and 2 personnel should select those recommended competencies and learning objectives from among those listed in the FEMA document for their training target audience as the basis upon which to develop their training course(s).

g. Additional training topics:

The following additional training topics merit consideration for inclusion in each of the preceding training categories:

- Hazard recognition
- Safe work practices and procedures
- General site safety
- Site safety plans and standard operation procedures
- Decontamination procedures and practices
- Emergency procedures, first aid, and self-rescue
- Safe use of field equipment
- Safe sampling techniques
- Storage, handling, use and transportation of hazardous materials
- Use, care, and limitations of personal protective equipment with emphasis on respiratory protective devices
- Rights and responsibilities of employees under OSHA standards and other laws concerning safety and health, right-to-know, compensation, and liability
- Medical monitoring requirements
- Community relations

11.3.3 Refresher

All full-time emergency response personnel trained in accordance with 1910.120(q)(6) are required to have annual refresher training *or* to demonstrate competency based upon the methodology used by the employer annually in the hazardous materials emergency response category to which they have been trained. No minimum hours for such refresher training are required by the standard.

Providers of 1910.120(q) refresher training should develop a refresher course curriculum that addresses the required competencies for the pertinent responder categories and should ideally include a drill exercise as the hands-on component of the course.

11.4 EMERGENCY RESPONSE: Collateral duty

11.4.1 Introduction

A large and varied group of first responders may be pulled into a hazardous materials incident to provide specific support services incidental to their primary occupation. None are currently required to have pre-incident hazardous materials response training, although that may be changing because of emerging DHS training requirements based upon HSPD#8 for skilled support personnel for example and OSHA interpretations specific to hospitals (Whittaker. 4/25/97). These personnel are involved in the emergency response phase under 29 CFR 1910.120(q), but have no function after the emergency is terminated and clean-up has begun, unless they have additional training. This applies whether the hazardous substances were purposely released by terrorist or were incidental to the act of terrorism. This category includes, among others:

- Skilled support personnel such as heavy equipment operators in the construction sector, railroad personnel who operate equipment that could be used in an incident response, and certain hospital personnel, which are described at 29 CFR 1910.120(q)(4).
- Specialist employees who provide their expertise to the first responders with respect to specific hazardous materials, which are described at 29 CFR 1910.120(q)(5).

The following are examples of additional skilled support personnel and specialist employees:

- Industrial workers with part-time duties in chemical emergency response
- Service and maintenance workers such as power utility and facility workers
- Security guards
- Transportation workers: truck, rail, water, warehouse
- Public works personnel
- Sanitation workers
- Street and highway maintenance workers
- Hospital first receivers
- Hospital "skilled support personnel" as described by OSHA (Whittaker 4/25/97).

For purposes of this document, this category is termed collateral duty.

11.4.2 Initial training

Emergency response training for collateral duty responders is established in the OSHA standard at 1910.120(q)(4) for skilled support personnel and 1910.120(q)(5) for specialist employees.

a. Skilled Support Personnel:

Skilled support personnel are to be provided a "just-in-time" on-scene training briefing about the hazards of the site and actions to be taken to protect the individual worker. Except for the "just-in-time" training briefing at the time of deployment, no other training is required by the OSHA standards for these

personnel, although many employers are opting for more training so their workers can stay on the site after the incident transitions from emergency response/rescue to clean-up.

NIEHS awardees were instrumental in partnering with OSHA in developing the OSHA Disaster Site Worker Course (designated 7600 by the OSHA Training Institute), which is primarily focused on skilled support personnel and includes mandatory hands-on respirator training. Consequently, this document strongly supports providing the OSHA course for all skilled support personnel. Such training is to be provided by instructors authorized as course instructors by successfully completing the OSHA Disaster Site Worker Train-the-Trainer Course (OTI 5600). Upon successfully completing the 7600 course, students receive a certificate and OSHA 7600 card (the "course" card), which permit those workers to enter and work as skilled support personnel at disaster response sites. For workers already trained in accordance with 1910.120(e), *Clean-up*, a separate certificate and card (the "program" card) are issued, which permit these workers to subsequently engage in the clean-up activities that are designated as HAZWOPER sites.

Transportation workers who may engage in after-incident clean-up activities also require initial training pursuant to 1910.120(e) and the OSHA 7600 course may be an appropriate course as well. Fixed facility workers are required to be trained in the facility emergency response plan and, if management intends to use facility employees to respond to a hazardous materials emergency, those employees are required to be trained in the appropriate emergency response categories described in 1910.120(q)(6) and section 11.3 of this document. If a facility hazardous materials incident requires subsequent cleanup that is covered by the HAZWOPER standard, off-site workers trained in accordance with 1910.120(e) are required. If, however, the employer elects to use facility employees to conduct such a cleanup on the company property, those employees must be trained specific to the OSHA respiratory protection standard and the Hazard Communication standard, among others as specified in 1910.120(q)(11)(ii). Such training may be considered 1910.120-supporting training per Annex A of this document.

The recent "OSHA Best Practices for Hospital-Based First Receivers of Victims from Mass Casualty Incidents Involving Release of Hazardous Substances" (4) identifies certain hospital personnel as potential skilled support personnel and states that the briefing per 1910.120(q)(4) is required. That guideline recommends that employers identify such potential skilled support personnel and provide pre-incident training prior to a mass casualty incident. Of interest, the OSHA hospital first receiver's guideline also notes that such skilled support personnel who may be required to wear a respirator in a skilled support role should be medically cleared for respirator use and properly fit tested, but doesn't require additional training. This apparently conflicts with the requirements for additional upgrade training of "occasional" cleanup workers when, subsequent to their initial training, it becomes necessary for them to wear respiratory protection. It appears appropriate that a skilled support personnel training program be developed to serve the hospital sector. Such a course could use the OSHA First Receivers document as a basis with additional elements specific to the individual hospital program.

<u>b. Specialist employees</u>:

The OSHA standard requires that specialist employees receive training or demonstrate competency in their area of specialization annually.

c. Hospital First Receivers:

The OSHA hospital first receiver's document (4) provides guidance on the level of training appropriate for personnel assigned specific duties in a response. Awareness level, operations level, skilled support personnel briefings, and HAZCOM training are addressed. Required competencies are listed for the awareness and operations level training, which are identical to those for the same full-time responder levels detailed in the preceding section of this document. Awareness and operations level training must be based upon the minimum competencies required in 29 CFR 1910.120q)(6)(i) and (ii) specific to the hospital setting. Additional training competencies should be selected from the FEMA Guidelines, which are based upon NFPA 472.

11.4.3 Refresher

Annual refresher training or annual certification of competency by their employer is required for responders trained to the awareness and operations levels. For the other collateral duty personnel identified in this section there are currently no established annual refresher requirements. Refresher training is recommended, however. It could be of value, particularly in this currently dynamic sector, if it is based upon new developments in the collateral duty sector, lessons learned, and re-validation of key protective measures such as respirator wear.

12. CERTIFICATION

OSHA initially addressed accreditation or certification of training programs under 1910.120 with a Notice of Proposed Rulemaking in 1990. OSHA has never finalized that rule at 29 CFR 1910.121. Instead OSHA issued a non-mandatory training appendix to the standard (Appendix E), which was based in large part on the original NIEHS/WETP Minimum Criteria requirements for such training under the WETP grants program.

Accreditation or certification of some of the 1910.120-supporting training programs in Annex A of this draft document is already covered by existing requirements, such as AHERA for asbestos abatement activities. Many of the remaining programs are governed by requirements established in specific OSHA standards, but are not required to be accredited or certified, nor is it likely that they will be in the future.

Each training provider for which this guidance is applicable shall annually certify in writing that the training program meets the requirements established in this guidance specific to the HAZWOPER courses, 1910.120-supporting training courses, and all-hazards training courses offered. Where certification or accreditation is also required by another certifying/accrediting entity, such as for asbestos abatement, it shall be noted and a copy of the applicable certification/accreditation appended.

13. ANNEXES

HAZWOPER-trained workers may be required to have additional training due to particular hazards present on specific HAZWOPER sites. Typically, such additional training is associated with hazards that may be present for which specific regulations or standards require training. An example is radiation training associated with mixed waste remediation work. This guidance terms these training programs "1910.120-supporting training." They are presented in Annex A. Several such 1910.120-supporting programs are identified, as are the training requirements and certification/accreditation authorities for each where such currently exist. Under the scope of the NIEHS/WETP training grants program these 1910.120-supporting training programs are funded on the basis of the individual grants contract.

Annex B provides the technical workshop agenda and participants list, which served as the basis for this document.

Annex C provides the FEMA HAZ MAT/WMD response guidelines document, which serves as a central reference document to the Emergency response sections of this document under section 11.3 and 11.4. It is provided with paper versions of this document in CD format. The FEMA guidance is also available from the National Clearinghouse website at: http://www.wetp.org/wetp/public/hasl_get_blob.cfm?ID=1465

Annex D provides a checklist with respect to the Principles of Adult Education, which is referenced in section 8 of this document.

13.1 Annex A: 29 CFR 1910.120-supporting training programs

Employers engaged in work covered by the HAZWOPER standard may need additional worker training (possibly including certification) that is associated with specific hazards that may be present in a particular HAZWOPER work environment for which there are additional applicable standards or regulations. Such additional competency training may be applicable to hazardous waste site operations [1910.120 (b)-(o)], RCRA/TSD operations [1910.120(p)], and emergency response operations [1910.120(q)]. Additionally, there may be other trainings that have direct relevance to 1910.120 but are not part of a required training regimen.

For purposes of the NIEHS/WETP grant program such additional training programs for target training populations that have been trained and certified in accordance with 1910.120(e), (p), or (q) as a pre-requisite may be funded by the program if such additional training programs are included in the annual renewal application, approved, and meet the following criteria in addition to the criteria specified in Sections 9 and 10 of this document.

OSHA 10 and 30 for General Industry and Construction: Training must be conducted by an instructor who has completed the OSHA 500 Train-the-Trainer course for Construction or OSHA 501 for General Industry and has been authorized by OSHA.

Radiation: Training for Rad Worker I and Rad Worker II must be in accordance with DOE 10 CFR 835 and DOE G 441.1-12 Guide or other specific Federal Agency regulations or standards specific to worker radiation training should such be required for the specific project.

Asbestos: The training program shall be accredited by the applicable State or Regional EPA Office authority for asbestos operations specified by that authority, if the employer requires certified workers to engage in such operations. The EPA Model Accreditation Plan at 40 CFR 763, subpart E, appendix c or 40 CFR 763.93 (a)(1) are applicable per the OSHA asbestos regulations depending upon the classification of the work.

Confined Spaces: Confined space recognition training is a requirement in the core HAZWOPER training programs. However, entry into confined spaces requires additional confined spaces training in accordance with 29 CFR 1910.146, *Permit-required confined spaces*. Such shall be conducted by instructors certified as competent to do so by the Training Director.

Lead: Training shall be conducted by instructors certified as competent by the Training Director and shall be in accordance with 29 CFR 1910.1025 or 29 CFR 1926.62. If required by the employer, the lead training program shall be accredited by the applicable State authority.

Blood borne Pathogens: Training shall be provided by an instructor certified as competent by the training director and shall be in accordance with 29 CFR 1910.1030.

Lock out/Tag out: Training shall be provided by an instructor certified as competent by the Training Director and shall be in accordance with 29 CFR 1910.147 The control of hazardous energy.

Process Safety Management (PSM): Training shall be conducted by an instructor certified as competent by the Training Director and shall be in accordance with 29 CFR 1910.119, 29 CFR 1926.64, or 40 CFR 68. This training may include: Lessons Learned Prevention Training, hazard identification training, or process hazard analysis training.

Mold: "Guidelines for the Protection and Training of Workers Engaged in Maintenance and Remediation Work Associated with Mold." 2005. Available from the National Clearinghouse at *www.wetp org*.

Trenching and Shoring: Training in accordance with 29 CFR 1926 Subpart P Excavations shall be conducted by an instructor certified as competent by the Training Director.

13.2 Annex B: Technical workshop agenda and participants.

NIEHS Worker Education and Training Program

Technical Conference

March 30 – April 1, 2005
Manhattan Beach, CA

Manhattan Beach Marriott • 1400 Parkview Avenue • Manhattan Beach, CA 90266 • (310) 546-7511

Agenda

2005 Spring Technical Conference

Wednesday, March 30, 2005

Keeping Quality Current:
An Update of the NIEHS Minimum Criteria for Worker Health and Safety Training for Hazardous Waste Operations and Emergency Response

2:00 p.m.	**NIEHS Welcome**	**Joseph Hughes**, WETB, NIEHS and **Dennis Lang**, DERT, NIEHS
2:15 p.m.	**Plenary Panel One:** The Importance of HAZWOPER	
	Moderator: **Joseph Hughes**, WETB, NIEHS	
	HAZWOPER: an indispensable training tool	
	• The role, importance, and positive impact of 1910.120	**Rich Nickle**, ATSDR
	• The challenges to the responder community in incident response, the importance of consensus standards, and the impact of the NRP	**Wayne Yoder**, DHS
3:00 p.m.	**Break**	
3:15 p.m.	**Plenary Panel Two:** Critical Crosscutting Issues	
	Moderator: **Bruce Lippy**, Clearinghouse	
	• Adult Learning Techniques	**Betty Szudy**, LOHP
	• E-learning	**Doug Feil**, Kirkwood Community College
	• Evaluation	**Tom McQuiston**, PACE Union
4:30 p.m.	**Charge to the Breakouts**	**John Moran** and **Donald Elisburg**, Clearinghouse
5:00 p.m.	**Closing**	
5:15 p.m.	**Meeting of the breakout co-facilitators and note takers** (Room 207)	

NIEHS **WETP Technical Conference** March 30 - April 1, 2005 — Manhattan Beach, CA

Agenda

2005 Spring Technical Conference

Thursday, March 31

8:00 a.m. **Breakfast available**

8:30 a.m. **Breakout sessions**

- **1:** General Criteria
- **2:** Program QC, Accreditation/Self-certification, Worker Training Principles, and Characteristics of Excellence
- **3:** Training Curriculum Guidelines 1910.120 (b)-(o) including .120-supporting and WMD
- **4:** Training Curriculum Guidelines for RCRA/TSD 1910.120 (p)
- **5:** Training Curriculum Guidelines for Full-time Emergency Response 1910.120(q)
- **6:** Training Curriculum Guidelines for Collateral Duty Emergency Response under 1910.120(q) including collateral duty facility emergency responders, hospital first receivers, SSP, specialist employers

10:30 a.m. **Break**

10:45 a.m. **Breakout sessions continue**

12:00 p.m. **Lunch**

Luncheon speaker **Robert Gottlieb**, Occidental College, co-author of the book, "The Next Los Angeles: The Struggle for a Livable City"

1:30 p.m. **Breakout sessions continue** (with break around 3:00)

5:00 p.m. **Closing**

5:30–7:30 p.m. **Reception**

Friday, April 1, 2005

8:00 a.m. **Breakfast available**

8:30 a.m. **Final meeting of breakout groups**

10:00 a.m. **Break**

10:15 a.m. **Plenary Session:** Reports of the Breakout Co-chairs and Discussion

11:45 a.m. **Next Steps and Closing** **Joseph Hughes** and **Bruce Lippy**, Clearinghouse

Keeping Quality Current:
An Update of the NIEHS Minimum Criteria for Worker Health and Safety Training for Hazardous Waste Operations and Emergency Response

Technical Workshop Attendee List

Patricia	Aldridge	Fluor Hanford/HAMMER	509-373-7972	*patricia_k_aldridge@rl.gov*
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13.3 Annex C: USFA/FEMA "Guidelines for Haz Mat/WMD Response, Planning, and Prevention Training." April 2003 Edition.

PDF version may be downloaded from:

http://www.usfa.fema.gov/downloads/pdf/publications/hmep9-1801.pdf

Guidelines for Haz Mat/ WMD Response, Planning and Prevention Training

Guidance for Hazardous Materials Emergency Preparedness (HMEP) Grant Program

April 2003 Edition

FEMA

13.4 Annex D: The Principles of Adult Education: A Checklist for Planners and Evaluators.

The following is intended to assist trainers and Training Directors who are developing a training program, and evaluators who are assessing a program's quality.

General Principles

The best training programs take advantage of the following characteristics of adult learners:

- Adults are self-motivated.
- Adults expect to gain information that has immediate application to their lives.
- Adults learn best when they are actively engaged.
- Adult learning activities are most effective when they are designed to allow students to develop both technical knowledge and general skills.
- Adults learn best when they have time to interact, not only with the instructor but also with each other.
- Adults learn best when asked to share each other's personal experiences at work and elsewhere.

Meeting the Needs of Adult Learner

☑ Does the learning environment encourage active participation?
How are the chairs, tables, and other learning stations arranged in the classroom?
How does this arrangement encourage or inhibit participation and interaction?
Can the arrangement be changed easily to allow different kinds of interaction?
Is the climate of the classroom sufficiently comfortable to allow learning?

☑ Does the social environment or atmosphere in the learning environment encourage people to participate?
Are warm-up activities or "ice breakers" needed to put people at ease?
Do trainers allow participants to say things in their own words, or do they translate what is said into other words or jargon?
Are participants encouraged to listen carefully to each other?
Are they encouraged to respect different points of view?
Are they encouraged to use humor and is the humor appropriate?

☑ People learn in different ways. Do the learning activities in the training program provide participants with an opportunity to do each of the following?
listen
look at visuals
ask questions
read
write
practice with equipment
discuss critical issues
identify problems
plan actions
try out strategies in participatory ways

☑ Does the program effectively promote participatory learning activities?
Is enough time allotted for participant interaction?
Have the instructors developed workable and effective interactive activities?
Does the physical environment encourage interaction?
Does the atmosphere in the classroom encourage in teraction?
Are the learning activities sensitive to cultural differences among the participants?
Does the training engage participants in critical thinking and analysis about the subject being covered?

☑ What kind of participatory activities are used in the program, and how much time is devoted to each?
role playing
case studies
audio-visual discussions
discovery exercises
planning exercises
mapping activities
group discussions
lecture-discussions
report-back sessions
evaluation sessions
drills and exercises.
computer use, web site access, simulations.
blended approaches utilizing integrated instructional technologies.

☑ How effectively do the lectures in the program encourage participation?
Are they combined with a participatory exercise?
Are they brief?
Are they well organized?
Are audio-visual aids incorporated in the lecture?
Does the lecturer rely too heavily on his or her notes?
Was their enough time for questions and comments from others?
Does the lecturer promote challenging questions about the content being delivered?

☑ How effective are the participatory activities used in the program?
- ✶ Are the purposes of the activities clearly specified?
- ✶ Are the tasks that people are expected to complete clearly described?
- ✶ Are participants given enough information to complete the expected tasks?
- ✶ Is the information accompanying the activity clearly presented and easily understood?
- ✶ Is the information presented relevant to the task?
- ✶ Are participants given enough time to perform the expected tasks?
- ✶ Are participants given enough time to share what they have learned from the tasks with each other?
- ✶ Are the participants given a clear summary of the main points they were expected to learn in the activity?

☑ How effectively do the case studies and role-playing activities in the program encourage participation?
Is the situation being discussed familiar to the participants?
Does the situation evoke strong feelings in the participants?

Does the situation lead to an in-depth analysis of the problem?

Does the situation encourage people to consider a range of possible strategies for dealing with the problem?

- ✶ Are people provided with enough information to participate in the activity in a meaningful way?
- ✶ Are people provided with too much information so that they have no room to improvise or to call on their own experience?
- ✶ Are people provided with an opportunity to discuss the social, cultural, and historical contexts of the situations?

☑ How effectively does the organization of the program encourage participation?

Are discussion groups small enough to ensure participation? (No more than 4 to 6 people.)

Is the ratio of discussion groups to instructors small enough? (A single instructor cannot effectively supervise more than three or four groups).

Is there enough room to enable each group to talk amongst itself without disruption?

Does each group have its own moderator and note-taker?

Does the responsibility for leading and recording the discussion rotate among those willing to do the job?

Are the groups supplied with guidelines about how to lead and report their discussions?

Do the activities make allowances for anyone in the group who may have problems reading and writing?

☑ Is the program sensitive to literacy differences?

Do the trainers check privately with anyone having reading and writing difficulties?

Is reading aloud or writing in front of the group only voluntary and never mandatory?

Are all instructions and other required material read aloud?

Do the materials incorporate enough visual aids and props?

Do the trainers repeat out loud anything they write on a board or flip chart?

Are evaluations conducted to assure that the trainees comprehend the training material?

☑ Do the audio-visual aids used by the training program encourage participation?

Do the instructors write an on-going record of what is being discussed on the board or flip charts?

Are participants encouraged to challenge the record if they consider it inaccurate?

Are approaches utilizing integrated instructional technologies effective in eliciting participation?

☑ Guidelines for Leading an Effective Discussion

Getting a Discussion Started

Use a provocative "trigger," small group exercise, or other activity to give the group something to talk about.

Plan a few specific questions that ask for opinions about the activity.

Use "brainstorming" activities to elicit as many different ideas on a given topic as possible.

Use small discussion groups (or "buzz groups") to elicit controversial interpretations or perspectives.

Use open-ended questions and controversial positions to evoke strong responses, but only after people have gotten used to talking together.

Keeping a Discussion Going

Ask questions that require the group to come up with ideas themselves rather than just respond to the instructors ideas.

Encourage people to draw on their own experiences by asking questions.

Call on people; it may be necessary to keep discussion going.

Redirect questions to the group--ask if others have ideas on the subject.

Try to keep everyone involved. Don't allow one or two people to dominate.

Set a good example: keep your own comments brief.

Provides opportunities and encouragement for those who may be hesitant to participate.

Much of this material was adapted from Nina Wallerstein and Harriet Rubenstein, ***Teaching About Job Hazards*** *(American Public Health Association, 1993)*

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Deputy Chief for Operations, Michael Kilpatrick……..202-586-4399
Deputy Chief for Operations, Russell Shearer……202-586-6151
Senior Advisor to Chief HSS, Mari-Jo Campagnone…….301-903-7053

Direct Reports to the Chief Health, Safety and Security Officer

Office of the Departmental Representative to the Defense Nuclear Facilities Safety Board:
Provides effective cross-organizational leadership in resolving Defense Nuclear Facilities Safety Board (DNFSB)-related technical and management issues necessary to ensure public health and safety.
Director: Mark Whitaker……202-586-3887

Office of Resource Management: Supports the infrastructure of HSS by providing balanced, unbiased, technically competent, and customer focused services in the areas of: (1) Financial Management, including budget formulation and execution; (2) Procurement Management, including contract and credit card programs; (3) Information Management, including technology-based solutions and programs; (4) Quality Assurance; (5) Human Resources, including recruitment and retention programs; (6) Administrative Services, including property management, travel, and work space management; and; (7) Strategic and Program Planning including performance and efficiency measures.
Director: Lesley Gasperow……..202-586-2775

Office of Security Operations: Strengthens the national security by protecting personnel, facilities, property, classified information, and sensitive unclassified information for DOE Headquarters facilities in the National Capital Area under normal and abnormal (i.e., emergency) conditions; managing access authorization functions; ensuring that executives and dignitaries are fully protected, and supporting efforts to ensure the continuity of government in all circumstances as mandated by Presidential Decision Directive. The Office is the database owner for the principal personnel security information processing activities of the Department and personnel security administrative review process.
Director: Robert Lingan…….....202-586-3345

Office of Departmental Personnel Security: Serves as the central leader and advocate vested with the authority to ensure consistent and effective implementation of personnel security programs DOE-wide. The Office will establish expectations for the DOE-wide personnel security program; establish mechanisms to assure timely, appropriate and consistent adjudication of clearances; develop quality assurance programs and processes for the personnel security program; develop and implement automation initiatives to enable DOE to meet OMB expectations for reducing clearance processing times; work with Office of Security Policy to identify needs for strengthening and improving personnel security and drug testing requirements in regulations and directives; work in partnership with the HSS National Training Center and the Chief Human Capital Officer to develop a training and certification program for all federal staff in the DOE-wide personnel security program. The Office will serve as DOE's single point of interface with the interagency personnel security community.
Director: Stephanie Brewer…….....202-586-3205

Office of Health and Safety: Establishes worker safety and health requirements and expectations for the Department to ensure protection of workers from the hazards associated with Department operations. Conducts health studies to determine worker and public health effects from exposure to hazardous materials associated with Department operations and supports international health studies and programs. Implements medical surveillance and screening programs for current and former workers and supports the Department of Labor in the implementation of the Energy Employees Occupational Illness Compensation Program Act (EEOICPA). Provides assistance to Headquarters and field elements in implementation of policy and resolving worker safety and health issues.
Director: Patricia Worthington……301-903-5926

Office of Nuclear Safety and Environment: Establishes nuclear safety and environmental protection requirements and expectations for the Department to ensure protection of workers and the public from the hazards associated with nuclear operations, and protection of the environment from the hazards associated with all Department operations. Provides assistance to field elements in implementation of policy and resolving nuclear safety and environmental protection issues.
Director: Andy Lawrence…….202-586-6740

Office of Corporate Safety Analysis: Manages and promotes corporate safety and quality assurance programs and provide analysis of Department of Energy (DOE)-wide performance in protecting the public, the workers and the environment while performing the missions of DOE. This analysis is valued in corporate decision-making and synthesizes operational information to support continuous environment, safety and health (ES&H) improvement across the DOE complex. Seeks improvements in protection methods and provides feedback used to enhance safety and health policies.
Director: William Roege…..…..……301-903-8008

Office of Enforcement: Promotes overall improvement in the Department's nuclear safety, worker safety and health, and security programs through management and implementation of the DOE statutorily required enforcement programs.
Director: Arnold Guevara…….301-903-2178

Office of the National Training Center: Is the Department's Center of Excellence for Security and Safety Training and Professional Development, designs, develops, and implements state-of-the-art security and safety training programs for Department federal and contractor personnel nationwide, including the National Nuclear Security Administration (NNSA). NTC provides training based on technical qualification standards. As appropriate, NTC extends its services to other government agencies involved in protecting critical national security assets.
Director: Jeffrey Harrell…….505-845-5170 Ext 117

Office of Independent Oversight: Provides an independent assessment of the effectiveness of policies and programs in safeguards and security; cyber security; emergency management; environment, safety and health; and other critical functions of immediate interest to the Secretary, the Deputy Secretary, the Administrator of the National Nuclear Security Administration (NNSA), the Under Secretary for Energy, and the Under Secretary for Science. The office is organizationally independent of the DOE offices that develop and implement policy and programs and can therefore objectively observe Departmental operations, providing unbiased information to senior DOE managers using a systematic oversight process that emphasizes performance and performance testing.
Director: Brad Peterson……...301-903-5781

Contact Information: Direct Reports to the Chief Health, Safety and Security Officer (cont)

Office of Security Policy: Maintains the Department of Energy's security integrity through the development and promulgation of safeguards and security policy for the protection of the National Security and other critical assets entrusted to the Department. The Office also manages DOE-wide activities for foreign national visits and assignments and determinations of foreign ownership, control or influence.
Director: Barbara Stone……..301-903-4642

Office of Security Technology and Assistance: Protects the Department's critical assets and national security by providing security expertise to assist Headquarters and field elements in planning site protection strategies and by coordinating with domestic authorities to provide safeguards and security technical assistance, technical systems support, and new technology development and deployment opportunities.
Director: Larry Wilcher…….301-903-5108

Office of Classification: Develops and interprets Government-wide and Department-wide policies, procedures and guidance, performs document reviews, and conducts training to ensure the accurate identification of information and documents that must be classified or controlled under statute or Executive order to protect the National Security, and controlled unclassified information (Official Use Only) to protect commercial and private interests and to provide for the effective operation of the Government.
Acting Director: Andy Weston-Dawkes……301-903-3526

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851 Rule Enforcement
(Office of Enforcement) - Arnold Guevara/Kathy McCarty……301-903-0100

Corporate Safety Analysis - Bill Roege…….301-903-8008

Environmental Policy and Assistance - Tom Traceski……202-586-6374

Former Worker Programs - Pat Worthington……..……301-903-5926
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Independent Oversight - Brad Peterson……...301-903-5781

National Training Center (NTC) - Jeff Harrell……..…….505-845-5170

HSS HAMMER Representative (NTC) - Jeff Harrell...……505-845-5170

HSS Focus Group Liaison - Mari-Jo Campagnone……301-903-7053

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Office of Health, Safety and Security Website: http://www.hss.doe.gov