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### A Web-Based Resource for Construction Safety and Health

Jane Seegal & Sharretta Benjamin

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## IH Interface

# A Web-Based Resource for Construction Safety and Health

*Stan Salisbury and William J. Daniels, Column Editors*

Reported by Jane Seegal and Sharretta Benjamin

Although research in construction safety and health has increased markedly in the past decade, construction remains one of the most dangerous types of work. The federal government now offers several million dollars in funding for safety and health training and research through the Occupational Safety and Health Administration (OSHA), the National Institute of Environmental Health Sciences (NIEHS), and the National Institute for Occupational Safety and Health (NIOSH); little of this money was available in 1990. Still, the rate of deaths from injuries in construction has remained roughly constant at about 14 per 100,000 workers. This figure is higher than for any other industry, except two: mining and agriculture (which includes logging and fishing). Given about 9 million construction workers in the United States, the numbers killed yearly in construction—more than 1,100 in the year 2000—exceed those in every other industry. Add the well over 190,000 serious injuries and an unknown number of illnesses to the toll, and there is no doubt about the need for a marked improvement in worker protections.<sup>1</sup>

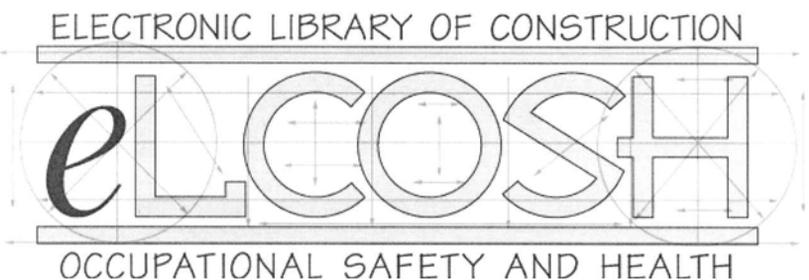
Believing that a different approach to the problem might help, the Center to Protect Workers' Rights applied to NIOSH for funding for a Web-based clearinghouse on construction

safety and health. The Center to Protect Workers' Rights (CPWR) is the research and development arm of the construction unions, the Building and Construction Trades Department, AFL-CIO. CPWR works with contractors, union leaders, universities, nonprofit organizations, and government agencies to improve workplace safety and health.

In 1999, CPWR proposed development of a construction Web site similar to the one for agriculture that was developed at NIOSH by Richard Niemeier, Ph.D. This National Ag Safety Database, supplied with information from the USDA and state extensions, quickly reached critical mass and a large audience. The site, at <http://www.cdc.gov/niosh/nasd/nasdhome.html>, gets more than 200,000 hits per month from farmers and others.

The construction clearinghouse, later named eLCOSH—the Electronic Library of Construction Occupational

Safety and Health—has been hosted by NIOSH, which is part of the CDC (Centers for Disease Control), at <http://www.elcosh.org>, since August 1, 2000. (See Figure 1.) Funding is from CPWR through a cooperative agreement with NIOSH. The intended audience is anyone interested in construction safety and health, such as contractors, equipment suppliers, site owners, workers, trainers, researchers, insurers, government policymakers, and health-care providers. CPWR produces the site with technical support from Conceptual Arts, of Gainesville, Florida, the shop that managed the agriculture database mentioned previously. The eLCOSH advisory committee includes staff from NIOSH, OSHA, the U.S. Department of Energy, and the National Academy of Sciences, as well as experts on training and workers' compensation. CPWR funding for eLCOSH runs through the year 2004, at which



**FIGURE 1**  
eLCOSH logo.

<sup>1</sup>2000 is the most recent year for which complete data were available at press time. According to the U.S. Bureau of Labor Statistics (BLS), 1,154, or just under 22% of 5,344, workplace deaths (in private industry) were construction-related. (If government is included, deaths in all industries were 5,915, and construction totaled 1,182 for the year 2000.) Death rates for mining and agriculture (private industry only) were 30 and 21 per employee, respectively. BLS reported 193,800 nonfatal injuries and illnesses involving days away from work for 1999, of which 2% to 4% are illnesses. The BLS nonfatal injury and illness figure, however, excludes the self-employed, who make up about 25% of the construction workforce. Occupational illnesses in construction are difficult to identify because of both the mobility of the workforce, which hinders the ability to track workers and exposures, and the lag between toxic exposures and symptoms of silicosis, cancers, and other diseases.

time the site is expected to become self-supporting.

### Information that Is Easy to Get and Use

Without an established base of pamphlets and public service announcement scripts to build on, eLCOSH has developed a bit more eclectically than the agriculture database, gathering materials in the United States and elsewhere from trade magazines, scientific journals, field research, training courses, and state health departments, among others. Some of the documents are no longer published, are not on the Internet, or are posted on the Net with password protection. A few postings are one-page explanations drafted for eLCOSH by CPWR staff to provide basics that can be hard to pin down. For instance, there are page titles such as "When do you need fall protection?" and "Which respirator filter do I need?"

The one-pagers are part of a focus on making the site user-friendly—

particularly to get information to workers to enable them to better protect themselves. Thus, the site map enables users to look up items by *trade*—i.e., carpenter, tile setter; *hazard*—i.e., chemical, physical, safety; *type of job site*; *training*; and *other* categories. In addition, the 40 or so site links are annotated. On some documents, a box at the top provides context; for instance, on a PowerPoint presentation about an OSHA regulation, produced as part of a Florida special-emphasis program, eLCOSH added a box to explain how the information applies to construction. The eLCOSH site's "What's New" section lists all additions since the last quarterly upgrade. (See Figure 2.)

### Not Just in English

Because language barriers are believed to be a substantial factor in site safety, eLCOSH has, from the beginning, emphasized providing good quality materials in Spanish, including pocket cards for workers, a Spanish-English

construction dictionary, and the government's Spanish translation of a chapter on construction that CPWR produced for the ILO *Encyclopedia of Occupational Health and Safety*, fourth edition, in 1998. As of December 2001, about 30 of eLCOSH's more than 500 documents were in Spanish, and an influx of more Spanish items was anticipated. A Spanish-language site map and search engine are provided, and users can easily switch between the Spanish and English versions of documents.

To serve non-Hispanic immigrant workers, documents are being obtained in other languages. One example is an alert on silica hazards, produced by the Bricklayers' Union, which is offered in French, Italian, Polish, Portuguese, and Russian, along with Spanish and English.

### Help for IHs, Too

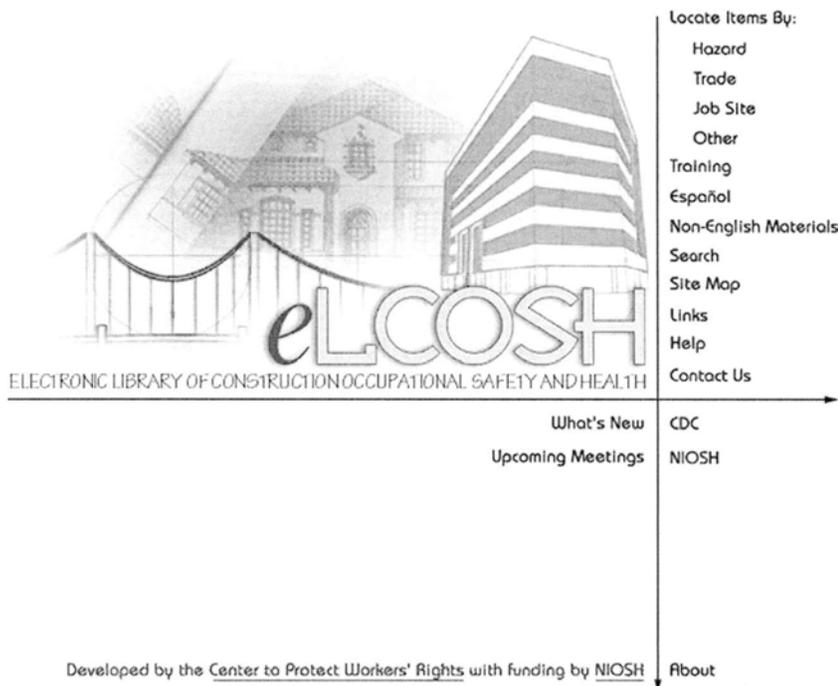
Because eLCOSH wants to reach everyone interested in the construction industry, a wide range of other materials is included. For example, industrial hygienists will find a link to the British Occupational Hygiene Society's *Guide to Direct Reading Devices*. Supervisors will find "tailgate talks," originally produced by the Labor Occupational Health Project at the University of California-Berkeley, for use with California regulations, and published in a national edition by the American Conference of Governmental Industrial Hygienists (ACGIH®). These talks will be provided in Spanish.

### Usage Statistics

We cannot verify that access to the information has prevented an injury,

**TABLE I**  
eLCOSH Usage Statistics  
in 2000 and 2001

	Visits/ month	Hits/ month
September 2000	7,500	46,000
September 2001	12,500	57,500



**FIGURE 2**  
Home page screen.

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### Selected Contributors to eLCOSH

Al Scott, Investment Group Services  
 American Society of Safety Engineers  
 Army Corps of Engineers  
 BUILT—Building Trades Unions Ignite Less Tobacco (California)  
 Bureau of National Affairs  
 The Center to Protect Workers' Rights  
 Construction Occupational Health Program, University of Massachusetts, Lowell  
 Construction Resource Analysis, University of Tennessee  
 Construction Safety Association of Ontario (Canada)  
 Construction Safety Council (Chicago)  
 U.S. Department of Energy  
*Engineering News-Record*  
 Florida Department of Labor and Employment Services  
*Houston Chronicle*  
 Hunter College Urban Public Health Program  
 International Labour Office  
 International Safety Equipment Association  
 International Union of Bricklayers and Allied Craftworkers  
 Laborers—Associated General Contractors Education and Training Fund  
 Labor Occupational Health Project, University of California, Berkeley  
 Massachusetts Department of Public Health  
 Midstate Central Labor Council (New York)  
 Ministerio de Trabajo y Asuntos Sociales (Spain)  
 National Ag Safety Database  
 NEA—The Association of Union Constructors  
 National Institute for Occupational Safety and Health, CDC  
 New Jersey Department of Health & Senior Services  
 New York Academy of Sciences  
 North Carolina Department of Transportation  
*Occupational Hazards*, Penton Media  
*Occupational Health & Safety*, Stevens Publishing  
 OSHA Office of Construction & Engineering  
 Ray Marshall Center for the Study of Human Resources (University of Texas)  
 Reuters  
 SALA Engineering Systems  
 Techno Fine USA  
 Washington Department of Labor and Industries SHARP  
 WORKSAFE! (San Francisco)

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illness, or death. We do know, however, that the numbers of visits are increasing. Statistics provided by the CDC show 51,842 unique visitors, 103,341 visits, and 517,731 successful hits in the first nine months of 2001. (The data exclude robotic search hits and initial stops on the homepage.) Rough figures comparing September 2000 (the second month of operation) with September 2001 show that the number of visits per month increased by 66 percent, and the estimated number of hits with each visit (averaged over several months) declined by about 25 percent, from 6.1 to 4.6, which may reflect repeat users. (See Table I.)

Based on the types of documents being visited and downloaded most often, the site was initially being used largely as a source for training. As the site's visibility improves, and as personal computers are more widely used on construction sites, it is hoped that eLCOSH will be used increasingly by workers, small contractors, and safety directors as a reference tool.

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**EDITORIAL NOTE:** Jane Seegal and Sharretta Benjamin direct the Communications department at The Center to Protect Workers' Rights, 8484 Georgia Avenue, Suite 1000, Silver Spring, Maryland 20910; Telephone: 301-578-8500; Fax: 301-578-8572; [www.cpwr.com](http://www.cpwr.com).

For readers with suggestions, comments, or ideas for future IH Interface articles, please contact the IH Interface Editors at [IHInterface@acgih.list.org](mailto:IHInterface@acgih.list.org) or use the feedback form found at [http://www.acgih.org/applied/ihi\\_sugg.htm](http://www.acgih.org/applied/ihi_sugg.htm). We look forward to hearing from you.

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