FALL PROTECTION – IT'S A SNAP!
ELECTROCUTIONS – DON'T GET ZAPPED!

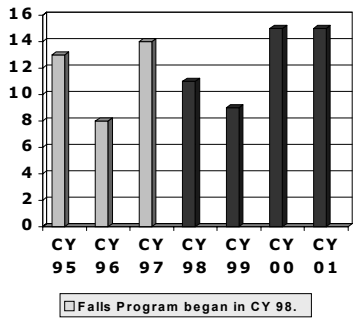
REGION VII **VOL. 5, ISSUE 1**

CONSTRUCTION FALL FATALITIES ON THE RISE; ELECTROCUTIONS DECLINE – by Marcia Drumm

After an initial 2 year decline in fatal construction fall incidents at the onset of the "Falls It's a Snap" Program, the Kansas City Region has experienced 2 years of increased fall fatalities in construction.

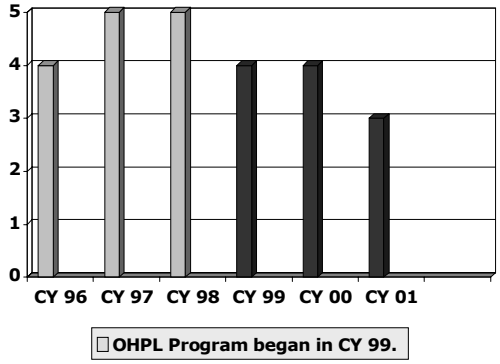
Targeted inspection activity has been expanded in an effort to counteract the trend.

Fall Fatalities CY 95 – CY 01



Incidence of electrocutions due to contact with overhead power lines (OHPL) has declined slightly since the program began in 1999.

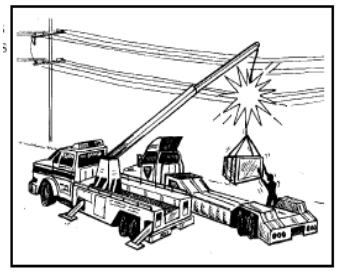
OHPL Fatalities CY 96 – CY 01



REGION VII FATALITY DATA FOR FALLS AND OHPL – by Peggy Taylor

During CY 2001, there were 18 fall and overhead power line construction fatalities in Region VII (Kansas, Missouri, and Nebraska). Of these 18 fatalities, 15 (83%) fatalities occurred between the hours of 10 a.m. and 3 p.m.

Of the 15 fall-related fatalities, seven of the fatal accidents were from falls from roofs, three were falls from one level to another, two involved scaffolds, two were falls from towers, and one was a fall from a moving vehicle.



Of the 3 overhead power line fatalities, 2 involved cranes coming into contact with an overhead power line and 1 involved an existing power pole that fell onto a digger truck's extended boom.

Thirteen (72%) of the 18 workers killed in CY 2001 were age 35 or older and 5 (28%) of the victims killed were age 34 or younger. The youngest was 19 years old.

Of the 61 fatalities investigated since CY 1998 (when the falls program began) 17 (28%) occurred on a Friday and 12 (20%) occurred on a Tuesday. The ranking for the remaining days of the week is: Monday (9 or 15%), Wednesday (8 or 13%), Thursday (7 or 11%), Saturday (5 or 8%), and Sunday (3 or 5%).

Several fall fatalities occurred because: floor openings were not properly covered, employee was not properly tied off, or the employee was not using the Personal Protective Equipment (PPE) that was available.

These hazards could have been eliminated. If you need assistance, please contact your local area or consultation office listed at the end of this newsletter.

FIVE PREVENTABLE DEATHS IN DECEMBER – by Marcia Drumm

During a month normally filled with good cheer, five families buried their son, father, brother or other family member or friend in December. Tragically, *all of these deaths could have been prevented*.

One 22-year-old employee was clearing leaves and debris and installing heat tape to the gutters of a building. He was working off of a ladder and fell 8 feet.

A 24-year-old victim was laying roof decking. He was sliding a 25-foot section of steel decking into place and stepped back into a floor opening that was not decked falling 14 feet to his death.

A 27-year-old employee was setting up to install tar paper on a pitched roof. He lost his balance and fell 17 feet onto the concrete patio below.

A 34-year old victim was involved in decking operations on the roof of a one-story structure that was 32 feet in height. He fell through an opening in the decking to the concrete below and was fatally injured.

A 47-year-old employee had just arrived to begin work when he and a coworker opened the hinged and latched elevated door. The victim slipped or stepped into the open elevator shaft falling 8½ feet onto a scaffold post.

WHAT'S NEW IN 2002 – by Brian Drake

Previously in the Falls and Overhead Power Line program, construction sites were chosen for inspections if one or both of the following happened: employees were observed exposed to a fall hazard and/or overhead power lines were observed on a construction site.

For the 2002 program, construction sites will be selected for inspection for the same reasons, but now construction sites can also be chosen for an inspection if any form of scaffold is present and is actively being used by employees. Observation of employee exposure to a hazard is not required.

During the 2001 program review process, it was found that in the last two years of the program (January 1, 2000 – January 1, 2002) in Region VII, 48% of all citations issued on inspections falling under this program were related to scaffold use (1926.450-1926.454). During the same time frame in Region VII, there were 7 accidents related to scaffold use resulting in 2 fatalities, 4 hospitalizations, and 2 other injuries.

With this information, it was felt that there is a greater need for outreach, training, and enforcement in all areas of scaffold use. This program will address other issues of scaffold use, along with fall protection, which were not addressed in previous programs. Just as in the past, the inspection would be limited to the items that are covered under this program, unless other serious hazards are observed.

Therefore, under the new Falls/Overhead Power Line/Scaffold program a construction site can be selected for an inspection if a scaffold structure is actively being used on the site, and/or employees are observed/exposed to fall hazards, and/or overhead power lines are observed on the construction site.

SCAFFOLDING – by Corey Beacom

What does scaffolding have to do with an emphasis program on falls and overhead power lines in construction? There are many issues involving scaffolding that, if not addressed, could lead to employees falling from a scaffold, installation of scaffolding too close to power lines, and even scaffold collapse. There are many types of scaffolds such as tubular weld frame, tube and coupler, pump jack, and suspension scaffolds to name a few. Each type of scaffold has its own requirements, but all must meet the general requirements in 29 CFR 1926.451.

During the period of the Falls and Overhead Power Line Program (October 1, 1998 – December 12, 2001) 1,132 violations were cited involving scaffolding. It was found that the most cited violations were a result of the installation of the scaffolding system. They include:

- Scaffold Foundation. The support of the scaffold platform by installing base plates on all scaffolds and mudsills when needed.

- Structure Stability. Platforms should be fully braced and if necessary tied into the structure.

- Work Platform. Employees need a safe surface to perform their work; this can be done by fully planking all levels where work is being performed.

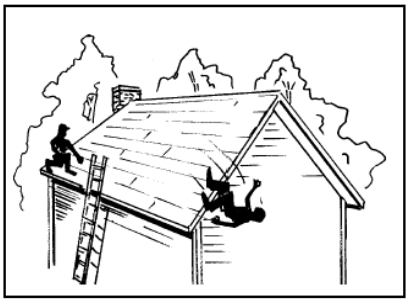
- Fall Protection. The standard requires employees working at all levels 10 feet or more above the ground or next lower walking/working surface be protected from falls. The most common method used on scaffolds is guardrail systems on all open sides and ends of the platform.

- Access. A common problem that is observed by compliance officers is the access to work platform. Ladders are not being provided for employees to climb the scaffolding. Under only a few situations and scaffold types can the employees climb the scaffolding.

Many, if not all, of these discrepancies can be prevented by the presence of a competent person. If a trained competent person is used in the erection, use and dismantling of scaffold system all of the problems listed above can be avoided. The competent person does not have to be formally trained but should be able to recognize and correct hazards. Formal training can be obtained from a variety of sources including trade associations, the OSHA Training Institute, and the OSHA Training Institute Educations Centers that are located in every OSHA Region.

FALL PROTECTION IN RESIDENTIAL CONSTRUCTION – by Matt Thurlby

Most of us are familiar with the fall protection rules as outlined in Subpart M for harnesses, guardrails, warning lines, etc. but what about slide guards? How about exposing an employee to a fall of 20 feet without any protection other than a painted line and a monitor? Well, OSHA Instruction STD 3-0.1A provides interim guidelines for fall protection requirements as applied to residential style construction.



How do you know that you have entered a residential style construction site? It's actually quite simple. Are the materials, techniques, environment, and methods similar to those used in creating a single-family dwelling? If yes, you're in a residential style site. This would include apartment buildings constructed of wood, strip malls, or any similar building provided that it meets the above test.

One of the largest differences between the interim guidelines and Subpart M is that infeasibility is implied in residential construction. The employer doesn't need to prove infeasibility in order to follow the directive and the less restrictive re-

quirements. They must have a fall protection plan and communicate it to the employees; however, it doesn't require the plan to be in writing.

The directive breaks the construction activities into four groups. Each group has specific requirements depending on the activity conducted. This is where the guidelines become interesting.

An employee erecting exterior walls on a 2nd floor doesn't need to have guardrails or a harness. They are allowed to paint a line six feet from the edge and to use a monitor to ensure the employees don't move too close to the edge. This is quite a departure from Subpart M.

In the Subpart, you may only use monitors during roofing operations. Now, once the wall is erected, the openings greater than six feet above a lower surface have to be protected as outlined in Subpart M.

All of the different guidelines established in the directive are to be cited under 29 CFR 1926.501(b)(13), Residential Construction. The directive is rather involved and lengthy. Read the directive and understand the requirements prior to inspecting any site that may fall under the Residential Construction guidelines.

There may be issues that conventional wisdom would require some form of intervention, but the directive would dictate KUDOS to the employer for following the rules.

The directive, STD 3-0.1A – Plain Language Revision of OSHA Instruction STD 3.1, Interim Fall Protection Compliance Guidelines for Residential Construction, can be accessed at the following address: http://www.osha-slc.gov/OshDoc/Directive_pdf/STD_3-0_1A.pdf

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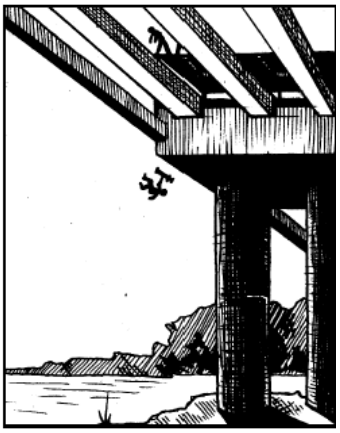
FALL PROTECTION REQUIREMENTS FOR STEEL ERECTION IN CONSTRUCTION – by Don Kallstrom



The compliance directive (CPL 2-1.34, OSHA inspection policy and procedures) for OSHA's steel erection standards for construction was signed on March 22, 2002. The directive can be viewed at the following website: http://www.osha.gov/OshDoc/Directive_pdf/CPL_2-1_34.pdf. The pdf document is 2.67 MB; therefore, it is recommended that it be saved to the hard drive and printed offline.

There are three primary sets of fall protection requirements for construction, which are based on the heights and activities which employees are engaged in.

The different heights at which fall protection is required are: 1) 6 feet (See Subpart M which deals with general fall protection); 2) 10 feet (See Subpart L--Scaffolds); and 3) 15 or 30 feet (See Subpart R--Steel Erection.).

The height at which fall protection is required depends upon the type of surface/platform the employee is on or what type of activity in which they are engaged. There are also requirements that

employees be protected from trips and falls regardless of the height.

Conventional types of fall protection, which may be used to protect employees from falls, are Guardrail Systems, Covers, Personal Fall Arrest (PFA) systems (Note that after January 1, 1998 a safety belt may not be used as part of a PFA) and Safety Nets.

Fifteen and Thirty Feet--Steel Erection--1926.750-761.

All employees engaged in steel erection activities, including connectors and decking crew, shall be protected from falls consistent with the following:

- Any employee who is on a walking working surface with an unprotected side or edge more than 15 feet above the next level must be provided with fall protection.
- There are two exceptions. They are: connectors and decking employees working in a controlled decking zone (CDZ). This exception is limited to 30 feet or TWO Stories which ever is less.
- **Notes:**

  1. Subpart M does not apply to steel erection activities.

  2. The term "steel erection" means the construction, alteration or repair of steel buildings, bridges and other structures, including the installation of metal decking and all planking used during the process of erection.

  3. The phrase "Steel erection activities" include hoisting, laying out, placing, connecting, welding, burning, guying, bracing, bolting, plumbing and rigging structural steel, steel joists and metal buildings; installing metal decking, curtain walls, window walls, siding systems, miscellaneous metals, ornamental iron and similar materials; and moving point-to-point while performing these activities.

  4. The term "Connector" means an employee who, working with hoisting equipment, is placing and connecting structural members and/or components.

  5. The term "Controlled Decking Zone" (CDZ) means an area in which certain work (for example, initial installation and placement of metal decking) may take place without the use of guardrail systems, personal fall arrest systems, fall restraint systems, or safety net systems and where access to the zone is controlled.

POLE REPLACEMENT - CONSTRUCTION OR MAINTENANCE – by Don Kallstrom

For employers engaged in the utility line construction and maintenance business, the decision as to what OSHA standards to follow could be confusing.

In an August 1994 memorandum the Deputy Assistant Secretary for Occupational Safety and Health provided guidance to all of OSHA's Regional Administrators (see OSHA Interpretation: http://www.osha-slc.gov/OshDoc/Interp_data/I19940811B.html).

For pole replacement, OSHA compliance staffs are to look at each condition on a case-by-case basis to determine whether the activity is construction or general industry.

The standards that address the replacement of utility poles are found in 1926.950 to 1926.960 and 1910.269. Although these standards parallel each other where utility poles are concerned, there are differences.

We encourage employers who work on utility poles to become knowledgeable with both standards. When employers are challenged with the decision as to which standard would apply in a pole replacement task and one is slightly more protective, go the extra mile for employee safety.

If the stability of the pole is suspect, use additional bracing, take the extra moment to ground vehicles even if you do not have to, or add additional insulating devices to assure employee safety.

NIOSH PUBLICATION ON WORKER DEATH BY FALLS – by Peggy Taylor

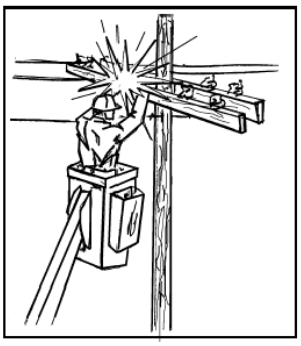
The National Institute of Occupational Safety and Health (NIOSH) is an excellent resource for safety and health information. Many of their numbered publications (from 1972 – 2002) are electronically available from the NIOSH website at the following address: http://www.cdc.gov/niosh/publistd.html.

For example, Worker Deaths by Falls – A Summary of Surveillance Findings and Investigative Case Reports, DHHS (NIOSH) Publication No. 2000-116, is a summary of surveillance data and investigative reports of fatal work-related falls from elevations and is recommended as a resource to reduce and prevent fatal falls in the workplace. The monograph contains 90 of the NIOSH Fatality Assessment and Control Evaluations (FACE) fall investigation reports for falls from elevation fatalities occurring between 1982 and 1997. It provides a review of "what is known about occupational fatalities due to falls from elevations, identifies common risk factors and exposures, and recommends general approaches to preventing these fatal events." This document is in the public domain and may be freely copied or printed.

Worker Deaths by Falls – A Summary of Surveillance Findings and Investigative Case Reports is electronically available in Adobe Acrobat PDF files at: http://www.cdc.gov/niosh/00/116pd.html. The full document is 2,279 KB. The document is also available in smaller sections. To view the PDF file, you will need to have the Adobe Acrobat Reader. If you don't have the Reader, you can download the free Adobe Acrobat Reader from Adobe Acrobat's website located at: http://www.adobe.com/products/acrobat/readstep.html. [Note: Since this is a large file, it is recommended that the file be saved to the hard drive and printed from there.] Print copies of the monograph (no. 2000-116) are provided free of charge, as long as quantities last, and can be ordered from NIOSH by sending your request to:

Publications Dissemination, EID
National Institute for Occupational Safety and Health
4676 Columbia Parkway
Cincinnati, OH 45226-1998
Telephone: 1-(800) 356-4674
Fax: (513) 533-8573
E-mail: pubstaft@cdc.gov

NIOSH PUBLICATION ON WORKER DEATHS BY ELECTROCUTION – by Peggy Taylor



NIOSH has also written a monograph on Worker Death by Electrocution – A Summary of Surveillance Findings and Investigative Case Reports, DHHS (NIOSH) Publication No. 98-131. From 1982 through 1994, NIOSH "investigated 224 electrocution incidents which resulted in 244 worker fatalities." A summary abstract of all 224 FACE electrocution investigative reports is provided at the end of the monograph. The monograph provides "an overview of electrical hazards, including the effects of electrical energy on the human body; a comprehensive summary of the epidemiology of occupational electrocutions based on National Traumatic Occupational Fatalities (NTOF) and NIOSH Fatality Assessment and Control Evaluation (FACE) data which identifies common risk factors for fatal injury due to contact with electrical energy; and recommendations for elements of an effective electrical safety program for the prevention of workplace electrocutions." This document is also in the public domain and may be freely copied or printed.

Worker Death by Electrocution – A Summary of Surveillance Findings and Investigative Case Reports is electronically available in Adobe Acrobat PDF file format at: http://www.cdc.gov/niosh/pdfs/98-131.pdf. The electronic document is 51 pages (137 KB). Print copies can be ordered from NIOSH using the information provided in the previous article.

In the future, full-text FACE reports will be available on the NIOSH Homepage.

GETTING THE WORD OUT – by Peggy Taylor

Our Fall Protection – It's a Snap! Electrocutions – Don't Get Zapped! Newsletter and our Disaster Facts Accident Reports are distributed to 500 mailing and 222 e-mail addresses. Our electronic distribution of these documents is continuing to grow in leaps and bounds. To date, we've published 62 Disaster Facts Accident Reports and 7 newsletters.

The newsletter provides information about our region-wide program, and other information related to fall protection, scaffolding, and overhead power lines. The Disaster Facts Accident Report provides information about the fall, scaffolding, and overhead power line fatalities that have occurred in Region VII and recommendations for accident prevention.

If you would like to be placed on the electronic distribution list for these documents, please send an e-mail to peggy.taylor@osha.gov. If you would prefer to receive a paper copy or do not have internet access, please complete the form at the end of the newsletter and mail it to Peggy Taylor at the Kansas City Regional Office address.

HELP FOR HISPANIC BUSINESSES AND WORKERS – by Peggy Taylor

As part of our outreach efforts to reach the Spanish-speaking construction worker, OSHA Region VII developed the Fall Protection Employee Pocket Guide [i.e., Como Prevenir Las Caidas (How to Prevent Falls)] and the Overhead Power Line Tips for Construction Workers [i.e., Consejos Acerca de Lineas Aéreo de Fuerza Eléctrica Para los Trabajadores de Construcción]. A copy of the publications may be obtained by contacting one of the Region VII offices listed at the end of the newsletter. English versions of both publications are also available.

The Fall Protection It's a Snap! Employee Pocket Guide is a tool that can be used by construction workers that are exposed to fall hazards. It is small enough to fit in the worker's toolbox or back pocket. The pocket guide provides information on fall protection, open holes and unprotected sides and edges, ladders, scaffolding, steel erection, and how to report a hazard.

The Overhead Power Line Tips for Construction Workers is a laminated card that is small enough to fit in the worker's shirt pocket. It provides information on what should be done prior to beginning construction at sites with overhead power lines, on working with power tools, and working with cranes and equipment. The safety tips on the card are not intended to be all-inclusive; they are just a starting point to help prevent electrocution from overhead power lines. For further information, please refer to 29 CFR 1926.

The Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) recognize that the number of Spanish-speaking safety and health workers in the United States will continue to increase. As part of their effort to reach the Spanish-speaking safety and health population, OSHA and NIOSH developed websites in Spanish on safety and health issues.

On February 25, 2002, OSHA announced a new webpage for Spanish-speaking employers and employees in the United States. Although additional information will be added to the website in the future, it currently features basic documents such as worker and employer rights and responsibilities, worker safety issues, resource materials, and other safety and health related information. The website can be accessed at: http://www.osha.gov/as/opa/spanish/index.html

NIOSH has also developed a website for the Spanish-speaking population. The website includes Spanish versions of several NIOSH workplace safety and health documents on topics relating to sanitary workers, construction, emergencies, and other safety and health topics. The website can be accessed at: http://www.cdc.gov/spanish/niosh/pubs-sp.html

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REGION VII'S 21(d) CONSULTATION PROGRAM

For on-site consultation services, contact the following office within your State:

KANSAS
Kansas Department of Human Resources
Industrial Safety and Health Section
Division of Workers Compensation
512 SW Sixth Avenue
Topeka, KSA 66603-3174
(785) 296-7476; fax: (785) 296-1775

MISSOURI
Division of Labor Standards and Industrial Relations
3315 West Truman Boulevard
P.O. Box 449 (65102)
Jefferson City, MO 65109
(573) 751-3403; fax: (573) 751-3721

NEBRASKA
Division of Safety
Labor and Safety Standards
Nebraska Department of Labor
State Office Building, Lower Level
301 Centennial Mall, South
Lincoln, NE 68509-5024
(402) 471-4717; fax: (402) 471-5039

REGION VII's OSHA OFFICES

KANSAS
271 W. 3rd Street North, Room 400
Wichita, KS 67202
(316) 269-6644; fax: (316) 269-6185
Toll-free: 1-(800) 362-2896 (Kansas only)

MISSOURI (WESTERN)
6200 Connecticut Avenue, Suite 100
Kansas City, MO 64120
(816) 483-9531; fax: (816) 483-5167
Toll-free: 1-(800) 892-2674 (Missouri only)

MISSOURI (EASTERN)
911 Washington Avenue, Room 420
St. Louis, MO 63101
(314) 425-4249; fax: (314) 425-4289
Toll-free: 1-(800) 392-7743 (Missouri only)

NEBRASKA
Overland - Wolf Building, Room 100
6910 Pacific Street
Omaha, NE 68106
(402) 221-3182; fax: (402) 221-3188
Toll-free: 1-(800) 642-8963 (Nebraska only)

REGIONAL OFFICE
1100 Main Street, Suite 800
Kansas City, MO 64105
(816) 426-5861; fax: (816) 426-2750

GET ON THE E-MAIL LIST!

This newsletter is published in the OSHA Regional Office at 1100 Main Street, Suite 800, Kansas City, MO 64105, (816) 426-5861.

If you would like to receive previously published copies of the Fall Protection – It's a Snap! Electrocutions – Don't Get Zapped! Newsletters or the Disaster Facts Accident Reports, please contact Peggy Taylor.

Please let Ms. Taylor know if your mailing address or e-mail address changes so that you can continue to receive our publications.

If you would like to receive this newsletter and the Disaster Facts via e-mail, contact Peggy Taylor at peggy.taylor@osha.gov. If you do not have access to E-mail or would prefer to

receive these documents as a paper copy, please return the following form:

OSHA Region VII Falls/OHPL Newsletter & Disaster Facts Mailing List

Name:

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Address:

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_____

Telephone No.: _____

Fax:_____

E-Mail Address:_____

Return to: USDOL - OSHA
Attn: Peggy Taylor
1100 Main Street, Suite 800
Kansas City, MO 64105
Phone: (816) 426-5861
Fax: (816) 426-2750