MIOSHA NEWS

Director's Column 2
Connecting Update 2
New Developments 3
Construction Update 4
General Industry Update 5
Consultation & Training Update 6
Technical Information 7

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Preventing Slips, Trips, and Falls in the Workplace

By Brenda Cani, Safety Consultant
CET Division

Slips, trips, and falls (STFs) are the **number one cause of injuries** in the workplace and happen in all types of work environments. According to federal OSHA, slips, trips, and falls cause **15 percent of all workplace deaths** and are second only to motor vehicles as a cause of fatalities. STFs can result in head injuries, back injuries, broken bones, cuts and lacerations, sprained muscles, or even death.

Because of the high rate of injuries and fatalities related to STF hazards, reducing these hazards is a priority of the MIOSHA Program. Incidents caused by STFs, like any other workplace injuries, can be anticipated and prevented. MIOSHA rules for both construction and general industry require employers to address the variety of STF hazards in their workplace.

Utilizing a basic STF prevention program will help employers:

- Understand how workplace accidents happen;
- Identify the trouble areas; and
- Eliminate and/or minimize the STF hazards.

Slip/Trip/Fall Statistics

In 2010, the Bureau of Labor Statistics (BLS) indicated STFs accounted for 24.5 percent of the total lost-workday injuries reported. Of that 24.5 percent, BLS reported slips and falls on the same level (including slips and trips that do not result in a fall) accounted for 74 percent of total lost-workday STFs, while falls from an elevation (including falls from heights and falls down stairs) accounted for 26 percent. In Michigan, 17.4 percent of all Workers' Compensation cases were due to injuries sustained from falling or slipping on the job.

There have been a significant number of **fatal falls in Michigan** in the last three years. In 2010, there were eight fatal falls and one slip/trip fatality in general industry and three fatal falls in construction. The numbers were reduced in 2011 to three in general industry and four in construction. To date in 2012 there was one in general industry and three in construction. (Details are in the sidebar.)

Slip/Trip/Fall Hazards

Slips can occur when floors or other working surfaces become slippery due to wet or oily processes, floor cleaning, leaks, or from materials and debris left in walkways. **Trips** can occur due to uneven floors or working surfaces, protruding nails and boards, from stretched carpet or bunched floor mats intended to prevent slipping, from holes or depressions in working surfaces, and from step-risers on stairs that are not uniform in height. Both slips and trips can result in falls. In addition, **falls** can occur when ladders are not properly maintained, and when stairways and elevated working surfaces are not designed properly.

Though challenging, STF injuries can be prevented by training all staff to recognize and manage the environmental hazards that contribute to fall-related accidents. In the workplace, the primary STF hazards are:

- Contaminants on the floor,
- Wet surfaces,
- Indoor/outdoor walking surface irregularities,
- Weather conditions,
- Inadequate lighting,
- Stairs and handrails,
- Stepstools and ladders,
- Tripping hazards, and
- Elevated working surfaces.

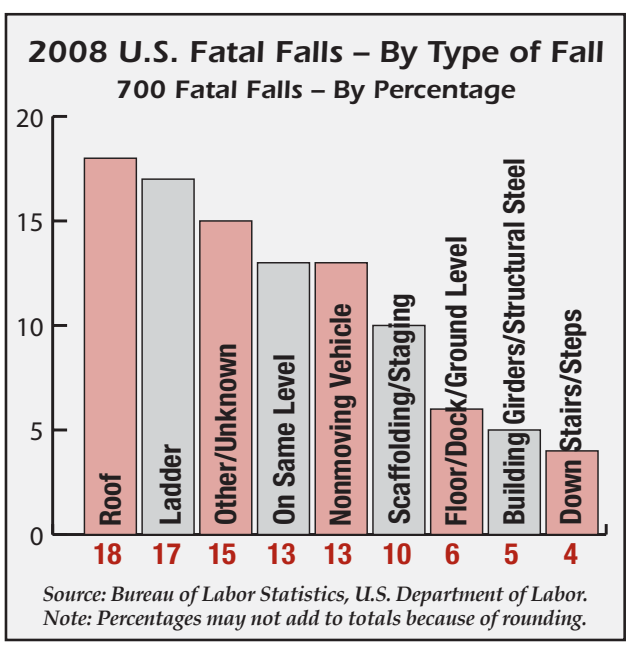
STF Prevention Program

In 2008, a National Institute of Occupational Safety and Health (NIOSH) study documented that implementing a slip, trip, and fall prevention program reduces STF injuries and workers' compensation claims. Each type of STF may require different features in a prevention program.

Elements of a **Slip, Trip, and Fall Prevention Program** should include:

1. **Plan:** Identify key risk areas and set goals for improvement.
2. **Organize:** Involve workers and assign responsibilities so they are committed to the process.
3. **Worksite Analysis:** Assess the risk to employees, to visitors, and to the public. Periodically review to be sure all hazards are addressed.
4. **Hazard Prevention and Control:** Ensure work practices and processes are being carried out properly and that they are being monitored.
5. **Safety and Health Training:** Provide essential training at all levels, including management.
6. **Take Control:** Establish policies and procedures to reduce the number of injuries.

For help with STFs, contact the CET Division at 517.322.1809.



Source: Bureau of Labor Statistics, U.S. Department of Labor.
Note: Percentages may not add to totals because of rounding.

STF Fatalities

2012 – 4*

General Industry

Driver: Fell from back of truck trailer

Construction

Painter: Fell from suspension bridge

Plumber/Owner: Fell from ladder

Roofer: Fell through roof to ground level

2011 – 7

General Industry

Electrician: Changing light bulb and fell off ladder

Owner: Fell from 7-foot height to surface below

Co-owner: Fell 40 feet during tree cutting operation

Construction

Carpenter: Fell setting trusses

Laborer: Fell while roofing

Project Manager: Fell into manhole, was asphyxiated

Roofer: Fell 49 feet from ladder

2010 – 12

General Industry

Laborer: Fell from tailgate of ATV

Maintenance Worker: Fell to the bottom of stairway

Loader: Fell from railroad boxcar

Food Service: Slipped on ice and fell down steps

Supervisor: Fell from ladder

Truck Driver: Slipped/fell out of truck

Ranch Worker: Fell through trap door

Fire Chief: Fell in fire station equipment area

Owner: Fell from ladder

Construction

Laborer: Fell cutting down beams

Carpenter: Fell from ladder

Roofer: Fell through roof cover

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Martha Yoder
Director

Workplace Risk Assessment

Are you adequately assessing the risk associated with each job at your workplace?

MIOSHA was recently reminded of the importance of proactively using risk assessment methods to minimize exposures to existing and potential workplace hazards.

Annually, state occupational safety and health programs are evaluated by federal OSHA to determine whether the program is "at least as effective" as federal OSHA. The review assesses progress toward strategic plan goals and makes recommendations to improve program operations.

One recommendation from the FY 2011 report encouraged MIOSHA management to be sure enforcement case files are reviewed to verify that hazards are properly evaluated.

We invited federal OSHA to provide an overview of their approaches, and on September 12th, MIOSHA supervisors and managers met with four federal OSHA managers. The session was productive and a good reminder.

My most significant "take away" was that MIOSHA workplace reviews are, in essence, a review of the risk assessment and reduction efforts taken by employers to minimize or eliminate hazards.

Stamping Operation Tragedy

One example brought this point home in a powerful way. It was a video of a stamping operation making jigsaw puzzles. A young female operator was protected by distance from the point of operation of the press by a work table over five feet wide.

The operator stood at the table with a hand tool to pull the puzzles toward her, removed the frame, and then moved the puzzle to a conveyor. At first look, this seemed like a good approach for safeguarding the employee. However, soon several puzzles came out of the press with pieces missing. The operator used the hand tool to pull the missing pieces out of the press – no problem.

Then a puzzle had one missing piece that was stuck in the press. The operator was unable to dislodge the piece with the hand tool. Trying to get the job done, she **climbed** on the table and **shimmied** into the press just as the press cycled. Sadly, **she lost both hands** and **part of both arms** in the press.

Unfortunately, our familiarity with a job can inappropriately lead us to perceive a relatively low level of risk. An excellent way to keep this from happening is to use a risk assessment method to evaluate the intended use of a machine or work process, the associated tasks, and the hazards. Through use of risk assessment, the possibility of the operator entering the point of operation might have been identified and steps taken to prevent this from happening. No employer wants an employee to lose hands and arms in order to get the job done.

MIOSHA Workplace Reviews

When MIOSHA reviews a workplace, we evaluate the hazard to determine the proper classification, and then evaluate the probability of an incident occurring. This includes reviewing the hazard the employee is exposed to during routine and nonroutine activities, times of employee personal comfort, and during ingress /egress from the work area. It requires talking with people and asking questions.

We encourage employers to use a risk assessment method that is appropriate for your industry and work activities. Resources include industry guidelines, consensus standards, and insurance company loss control resources. In addition, MIOSHA staff can assist you with hazard surveys, job hazard analysis training and safety and health management system reviews.

Be proactive in your diligence to uncover and address hazards at your workplace. The consequences of not taking action are potentially devastating. Taking action is worth the effort!

> ***"Be proactive in your diligence to uncover and address hazards at your workplace. The consequences of not taking action are potentially devastating."***

Bart Pickelman, CIH
Deputy Director

Connecting Involves Collaborating

The "Connecting MIOSHA to Industry" initiative helps us find common ground to work together and move forward to accomplish a shared goal. The common ground MIOSHA searches for is protecting the safety, health, and wages and fringe benefits of Michigan workers. Protecting workers is the right thing to do.

To do our best job protecting workers, MIOSHA consultants and compliance officers need the best training available. One of the most effective ways to train on industry hazards is to actually go to an employer to observe first-hand the operations/ hazards. That is what happened recently at **L.L. Johnson Lumber Manufacturing Company** in Charlotte.

L.L. Johnson Lumber opened its doors to allow MIOSHA to learn about the machinery and hazards in the wood processing industry. By collaborating with this employer, MIOSHA was able to obtain useful information to help equip our staff to do the best job possible. We thank them for their dedication to workplace safety and for sharing their industry knowledge.

Take a Stand Day

This year, MIOSHA's 8th annual *"Take a Stand Day"* provided another example of a MIOSHA connecting and collaborating opportunity! *"Take a Stand Day"* is held annually to devote both MIOSHA consultation and enforcement staff to provide voluntary visits to worksites across the state.

"Take a Stand Day" 2012, Beyer Roofing, Saginaw.

"Take a Stand Day" 2012, BorgWarner, Livonia.

The purpose of the visits is identifying, evaluating, and correcting hazards without citations or penalties. From the number of requests received, this is a program that Michigan employers truly value. We applaud the employers who opened their doors to MIOSHA staff to help them eliminate hazards and prevent injuries and illnesses.

Strategic Planning

A final example of connecting and collaborating involves MIOSHA's strategic planning process. Like many employers, MIOSHA develops and utilizes a strategic plan to guide operations and focus resources to accomplish its mission. MIOSHA's strategic plans cover a five-year time frame. On October 1st we will enter the fifth and final year of the current plan.

This means the process of developing the next strategic plan has begun. Development of previous strategic plans has involved input from MIOSHA's stakeholders once a draft plan was developed. This year MIOSHA is improving stakeholder involvement at the **beginning** of the process. The strategic planning process will begin by working collaboratively with three organizations to host small, diverse focus groups. These groups will provide valuable input on how well MIOSHA is doing and what is needed in the future to improve workplace safety and health.

Input will be incorporated into MIOSHA's next strategic plan. MIOSHA is grateful to partner with the **Michigan Manufacturers Association (MMA)**, the **Michigan Infrastructure and Transportation Association (MITA)**, and the **International Union of Operating Engineers**, who will host the focus groups for general industry, construction, and labor respectively.

Working together in a collaborative fashion enables all parties to find common ground and keep Michigan workers safe and healthy on the job.

Permit-Required Confined Space Entry in General Industry

Death May be Just a Breath Away!

By: Gregg Grubb, CET Division
Senior Industrial Hygienist

Three employees at a mobile home park went out to the lagoons in an attempt to track down the source of a rotten egg smell. Once there, they opened a manhole and discovered a leaking valve. An employee then entered the manhole in an attempt to close the valve. Upon turning the valve the wrong way, the employee began gasping for air and attempted to exit the space.

His co-workers tried to assist him in exiting the manhole, but he fell back into the space. Another employee then entered the manhole, closed the valve and attempted to rescue his co-worker. He too was overcome. The third co-worker then summoned emergency rescue services. Both employees were rescued, alive but in critical condition, and were able to recover from their permit-required confined space (PRCS) entry and rescue attempt.

Sadly, incidents such as these happen all too often in Michigan. Confined space and/or PRCS entries in Michigan have been regulated by MIOSHA for more than 40 years. Yet, a confined space fatality occurs nearly every year in a Michigan workplace. In most cases, **untrained** employees improperly enter **unidentified** confined spaces containing toxic atmospheres that have not been **tested** or **ventilated**. These improper entries then lead to improper and dangerous rescue attempts when employees try to rescue their co-worker(s).

PRCS and Confined Space Standards

MIOSHA's General Industry Safety Standard, Part 90, as well as Occupational Health Standard, Part 490, *Permit-Required Confined Spaces*, are identical and define a confined space as a space that:

1. Is large enough and so configured that an employee can bodily enter and perform assigned work; AND

2. Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry.); AND

3. Is not designed for continuous employee occupancy.

Note that **all three criteria must be present** for a space to be defined as a confined space. While spaces lacking all three criteria may pose serious hazards to employees, they cannot be regulated as a confined space under the PRCS standards. Other occupational safety and health standards would be used to protect employees in such cases.

Additionally, certain general industry activities performed in confined spaces are regulated by standards other than Parts 90 and 490. The following MIOSHA General Industry Safety and Health Standards also contain provisions for activities performed in confined spaces: Parts 1, 12, 50, 63, 77, 81, 86 and 526, and Occupational Health Rule 3303.

Permit-Required Confined Spaces (PRCSs)

In order for the PRCS standards to be applicable, a confined space must have one or more specified hazards present; that is, it must meet the definition of a permit-required confined space, or permit space. The PRCS standards define a permit space as a confined space having one or more of the following characteristics:

1. Contains or has a potential to contain a hazardous atmosphere (i.e., oxygen deficiency or enrichment, flammable atmospheres, and/or toxic atmospheres); AND/OR

2. Contains a material that has the potential for engulfing an entrant; AND/OR

3. Has an internal configuration such that an entrant could be trapped by inwardly converging walls or by a floor which slopes downward and tapers to a small cross-section; AND/OR

4. Contains any other recognized serious safety or health hazards (e.g., exposed live electrical circuits, unguarded mechanical hazards, heat, noise, etc.).

Note that if a space does not first meet the definition of a confined space it cannot be a PRCS (also known as a permit space). Additionally, a hazardous atmosphere must pose acute as opposed to chronic or long-term hazards.

PRCS standards require employers to evaluate their workplace to determine if any spaces meet the definition of a PRCS. While there is no requirement to identify confined spaces that do not meet the definition of a PRCS, it would be considered best practice to do so. If a hazard is introduced into a confined space that previously contained none (e.g., an employee brings a solvent into the confined space, etc.), it now becomes a PRCS whose entry would be regulated by the PRCS standards.

If the workplace contains PRCSs, employers must inform exposed employees of their existence and location by posting danger signs or any other equally effective means. Further, if their employees will enter permit spaces, the employer must develop a written permit space program.

Permit Space Entry Procedures

Simple steps such as identifying spaces, informing exposed employees, and developing a written plan for permit space entry, when combined with proper entry procedures, employee training and prevention of unauthorized entries will significantly reduce, if not prevent, employee deaths in confined spaces.

Procedures and equipment applicable for entry into permit spaces are dependent on the types of hazards present and whether they can be successfully controlled or eliminated prior to and during entry. The use of entry permits, training of personnel, and rescue and emergency service requirements all depend on the type of permit space entry that is performed. There are three ways to enter a PRCS.

These include:

1. Full permit entry – a (c)(4) entry: The most hazardous form of entry, where all hazards in the PRCS cannot be eliminated prior to entry. This type of entry requires the use of an entry permit containing specific content per the PRCS standards (which must be maintained for at least one year and annually reviewed), comprehensive training for all personnel associated with the entry, and provision for appropriately trained and equipped rescue and emergency services.

2. Alternate entry – a (c)(5) entry: This type of entry may be performed in PRCSs that only pose actual or potential atmospheric hazards. Forced air ventilation (negative or natural draft ventilation may not be used in this type of entry) must be directed into the area of the PRCSs where employees will be working. It requires a specified written certification and periodic atmospheric monitoring to verify air contaminants are maintained at less than 50% of specified limits (e.g., less than 50% of applicable permissible exposure limits or 5% of applicable lower explosive limits for flammable substances). Employee training is required. If atmospheric or other conditions in the space change, entrants are to exit and the space is to be re-evaluated to determine how best to complete the entry.

3. Reclassification – a (c)(7) entry: This type of entry may be performed if the PRCS poses no actual or potential atmospheric hazards and if all hazards within the space are eliminated without entry into the space. One of the two other entry procedures, as appropriate, must be used if all hazards cannot be eliminated prior to entry. Note that "control of hazards" does not equal "elimination of hazards." All hazards must be successfully eliminated from the PRCS (e.g., double-block and bleed a gas line versus lockout of its valve, etc.) in order to use this means of entry. It also requires a specified written certification prior to entry and training of employees. If hazards are reintroduced into the space or conditions in the space change, the employees must exit and the space must then be re-evaluated.

As can be seen, the entry of PRCSs in general industry workplaces (e.g., sewers, digesters, process vessels and tanks, etc.) is a task that is not easily accomplished. Such a task requires considerable information, education, investigation, evaluation, and preparation in order to prevent employee fatalities.

Always remember, when proper confined space entry procedures are not followed, death may be just a breath away!

Employees were injured when they entered this PRCS without using proper equipment or procedures.

Patty Meyer, Director
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Construction Partnerships Use Leading Indicators for Success

By: Patty Meyer, Director

More contractors are discovering the benefits of partnering with MIOSHA. Currently, MIOSHA has six construction partnerships. To take it to the next level, a **partnership committee** was created to look for ideas to further enhance partnership projects.

One of the requirements of a partnership is tracking and reporting the injury and illness (I & I) performance for each subcontractor on the project. This information is compiled and forwarded monthly to MIOSHA. The partnership committee came up with a new concept for the monthly reports.

Instead of only **focusing on the Lagging Indicators** (injuries that have occurred), why not **primarily focus on the Leading Indicators** (best practices).

Leading Indicators

This list will provide some great ideas for creating more employee involvement, improving safety cultures, and setting the bar even higher for keeping workers safe.

Below are some of the **Leading Indicators** being implemented on current partnership projects.

- Promote "Good Catches" recognition for employees reporting a safety hazard. This encourages more input from workers.
- Promote "On the Spot" recognition for employees working in a safe manner.
- Promote "Going Above and Beyond" recognition for employees who have truly demonstrated going the extra mile to ensure safety.
- Set up a drawing each week or month for workers who have reported safety hazards or good safety practices.
- Assist workers in obtaining 10-hour safety and health certification.
- Promote monthly safety lunches that include the company owners/leaders. It's an opportunity for upper management to thank the workers and speak to them about the corporate culture of safety.
- Incorporate job orientations and mentoring for new employees into every project.
- Create more training opportunities.

Barton Malow Company and MIOSHA are partners on the St. Joseph Mercy Oakland Campus Regeneration Project.

Erecting & Dismantling Scaffolds – Is Fall Protection Required?

By: Paul Wrzesinski, Safety Manager

Each time a scaffold is used it involves setting it up and then taking it down after the work is completed. During this time, employees can be exposed to fall hazards, the leading cause of fatalities in the construction industry.

It is a **common misconception** in the construction industry that employees are not required to have fall protection while erecting and dismantling scaffolds. In fact, Part 12, *Scaffolds and Scaffold Platforms*, Rules 1213 (6-8) specifically **requires**:

- The employer to designate a **competent person** to evaluate the site conditions and the type of scaffold being used in order to establish a safe means of access to the scaffold; and
- To determine whether fall protection is **feasible and won't create a greater hazard** for employees who are erecting and dismantling the scaffold.

Feasibility and Greater Hazard Evaluation

- Evaluate whether an acceptable anchor for a fall protection system can be set up on the structure or scaffolding.
- Determine if using a personal fall arrest system can be accomplished in accordance with the design and manufacturer's instructions without creating a greater hazard.
- Determine if environmental or job-site conditions create a hazard that can be eliminated using fall protection.
- Ensure ladders or other means of access are installed as soon as practical after the scaffold erection has progressed to the point they can be installed and used.
- Determine the amount of planking and/or work platforms needed to erect and dismantle the scaffold.
- Determine whether guardrails and/or cross bracing can be installed while erecting and dismantling the scaffold.
- Establish a sequence or procedure for erecting and dismantling scaffolds that limits employee exposure to falls.
- Ensure employees are trained in the correct procedures for erecting and dismantling scaffolds.
- Ensure only the employees that are authorized to erect/dismantle the scaffolding are permitted to be on the scaffold until it has been completed and inspected.

Asbestos Abatement Project Notifications

Dan W. Maki, Senior Industrial Hygienist

The importance of providing timely and accurate notifications for asbestos abatement projects cannot be underestimated. The specific requirement for providing notifications can be found in Act 135 of 1986, the *Asbestos Abatement Contractors Licensing Act*.

Asbestos abatement contractors performing friable asbestos removal or encapsulation work in Michigan must provide project notifications indicating the starting and ending dates and other job-related information to the Asbestos Program within a specified time frame. The Asbestos Program requires project notification 10 days prior to any non-emergency asbestos abatement project exceeding 10 linear feet or 15 square feet, or both, of friable asbestos-containing materials. Emergency asbestos abatement projects require notification by phone, fax, or mail prior to starting the projects.

In the event that a notification needs to be changed, it is crucial that an amended notification form be forwarded to the Asbestos Program as soon as possible. The Asbestos Program's Industrial Hygienists perform routine programmed investigations of active asbestos abatement projects and are guided by the notification database. If a programmed investigation is attempted on a project for which there is a notification but no activity is on-going, an alleged violation of up to $2,000 may be issued.

For more information, contact the MIOSHA Asbestos Program at 517.322.1320 or visit our website at www.michigan.gov/asbestos.

CASE SUMMARIES

SURVEYOR – STRUCK BY

In March 2012, a 27-year-old surveyor was struck and killed inside a temporary traffic work zone. The victim and a coworker were measuring the depth of two catch basins. The basins were located within two closed lanes of a freeway. A merging SUV was struck by a semi truck, causing the SUV to enter the work zone and strike the victim.

MIOSHA Violations (not inclusive):

- Part 22, *Signs, Signals, Tags and Barricades*:
  - Rule 408.42221(2) – Employees not given sufficient training in recognizing and avoiding the hazards associated with the placement of signs and barricades, and performing work in a work zone.
  - Rule 408.42223(1) – Traffic control devices were not installed and maintained as required.

ROOFER – ELECTROCUTION

In March 2012, a 50-year-old roofer was electrocuted while he and another employee were setting up a 40-foot aluminum ladder. They lost control and the ladder contacted a 7,600 volt overhead power line, which was located about 8 feet from the building. The other employee received an electrical shock.

MIOSHA Violations:

- Part 11, *Ladders*:
  - Rule 408.41112(1) – No training program provided to employees using ladders.
  - Rule 408.41124(7) – A metal ladder was within the minimum distance of 20 feet between power lines.
- Part 1, *General Rules*, Rule 408.40114(1) – Accident Prevention Program was not maintained.

NEP for Nursing and Residential Care Facilities

Bureau of Labor Statistics (BLS) data indicate that nursing and residential care facilities experienced one of the highest rates of lost workdays due to injuries and illnesses of all major American industries.

Incidence Rates

In 2010 the incidence rate for cases involving days away from work in nursing and residential care facilities was 2.3 times higher than that of all private industry as a whole, despite the availability of feasible controls to address the hazards.

The 2010 BLS data also indicates that 51.4 percent of all reported cases with days away from work within this industry were due to overexertion and injuries from slips, trips, and falls.

Health Care Hazards

The most commonly identified hazards in these medical industries include:

- Ergonomic stressors in patient lifting;
- Slips, trips, and falls;
- Bloodborne pathogens;
- Tuberculosis; and
- Workplace violence.

OSHA enforcement data indicate that the most frequently cited standard in nursing and residential care facilities is Bloodborne Infectious Diseases. Additionally, employees working in nursing and residential care facilities have been identified by the Centers for Disease Control and Prevention (CDC) as being among the occupational groups with the highest risk for exposure to tuberculosis.

National Emphasis Program

Because the seriousness and prevalence of the hazards in these facilities are nationwide, OSHA developed a national emphasis program (NEP) to focus outreach efforts and inspections on specific hazards in these healthcare industries (NAICS codes 623110, 623210 and 623311) for a three-year period. OSHA will target nursing and residential care facilities with a days-away-from-work (DART) rate of 10.0 and higher, in an effort to reduce occupational injuries and illnesses.

States are asked to participate in this national emphasis effort, and **MIOSHA is adopting the NEP on October 5, 2012**. The NEP provides guidance to MIOSHA staff on policies and procedures for conducting inspections specifically focused on the hazards associated with nursing and residential care facilities.

The NEP Directive can be viewed on the OSHA website, under Directives, at www.osha.gov.

Health Interpretation

Question: When does an employer have to provide an eyewash and does a small self-contained, quart eyewash bottle satisfy MIOSHA requirements to provide an eyewash?

Answer: MIOSHA Part 472, *Medical Services and First Aid*, requires an employer to ensure that suitable facilities for quick drenching or flushing of the eyes and body are provided within the work area for immediate emergency use when the eyes or body of any person may be exposed to injurious or corrosive materials. Corrosive materials are those solutions that have a pH of 9 or more or acidic materials that have a pH of 4 or less. Some organic materials such as peroxides, can also cause serious damage to the eyes or skin.

As designated in ANSI standard Z358.1-2009, a suitable eyewash/shower facility must be clearly marked, well lighted, and easily accessible (i.e., no obstacles, closeable doorways, or turns). Self-contained eyewash equipment (i.e., portable units) must be capable of delivering to the eyes not less than 0.4 gallons per minute for 15 minutes minimum for a total volume of six gallons. A quart-size eyewash bottle is not a suitable eyewash facility. This eyewash bottle can be used in conjunction with an eyewash unit as described above, but not in place of it. Requiring the use of appropriate personal protective equipment (i.e., safety glasses, goggles, gloves) where injurious or corrosive materials are used will further help to prevent employee tissue contact with the corrosive materials. Visit the MIOSHA website to see complete details in the Eyewash Instruction.

CASE SUMMARIES

MAINTENANCE TECHNICIAN – CRUSHED

In October 2011, a 37-year-old maintenance technician was making adjustments to a machine on a coating line. A second employee, believing the adjustments had been completed, lowered the belt wrapper, trapping the maintenance worker between it and the machine frame.

MIOSHA violations:

- Part 12, *Welding and Cutting*, Rule 1281(2) – Inadequate activation control, resistance welder.
- Part 85, *Control of Hazardous Energy Sources(Lockout/Tagout)*:
  - Rule 1910.147(c)(4)(i) – Inadequate energy source evaluation and procedures, belt wrapper.
  - Rule 1910.147(c)(7)(iii)(B) – Inadequate lock out training for authorized employees.

MACHINE OPERATOR – CAUGHT IN

In June 2012, a 29-year-old employee accessed an unguarded area of a conveyor to clean debris from the belt while the conveyor was still running. The employee was caught between the belt and idler roller, causing fatal injuries.

MIOSHA violations:

- Part 14, *Conveyors*:
  - Rule 1431(1) – A lock out procedure was not developed or utilized when clearing the belt and conducting repair and lubrication operations.
  - Rule 1411(1) – Inadequate training, employees not trained to lock out the conveyor when cleaning and making adjustments.
  - Rule 1442(2) – A nip point at a pulley was not guarded by an enclosure or barrier constructed to prevent access by an employee's body or loose clothing.

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Safety Officer Field Training

By: Drew Popovecz, Senior Safety Officer

As part of MIOSHA's General Industry training program, safety officer trainees must successfully complete a rigorous training program. The training includes classroom lectures, written exams, and hands-on field training. During the field training, the trainees shadow established safety officers while they conduct safety inspections.

Onsite Industry Training

For several years, **L.L. Johnson Lumber Manufacturing Company**, located in Charlotte, has provided safety officer training in General Industry Safety Standard Part 27, *Woodworking Machinery*. L.L. Johnson President **Mark Johnson** hosted the onsite visits.

Johnson explained and demonstrated woodworking techniques and equipment utilized in harvesting and processing hard and soft wood trees into usable lumber for various industries. This included safe work practices.

Trainees observed a range of wood processing equipment, including tree de-barking equipment, wood refining machines, and glue applicators. Also explained were maintenance techniques, blade sharpening, wood panel glue-up techniques, and the science behind transforming harvested trees into useable lumber maximizing economic value. Throughout the visit, details demonstrating machine guarding upgrades were emphasized.

Guarding Upgrade

The company increased employee operator safety on their gang rip saw. The saw was adequately guarded by the manufacturer except for the out-feed section. This machine is operated by two employees, one to feed stock into the machine and the other to receive out-feeding stock. By fabricating an out-feed chain sweeper and guard, the company improved the safety of the receiving operator. Prior pinch points and areas where clothing could get caught in the feed chain were eliminated.

Additionally, trainees learned that machine guard systems used to guard point of operation pinch points may become impractical and hinder machine performance. When this happens, other MIOSHA standards provide specifications to correctly configure a standard barrier guard system to provide equal employee protection.

L.L. Johnson President Mark Johnson (3rd from left) provided hands-on training to MIOSHA safety officer trainees.

Nella Davis-Ray, Director
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Best Practice: Verso Paper Contractor Safety

By: Doug Kimmel, MVPP Program Specialist

Verso Paper is a leading North American producer of coated papers, including coated groundwood and coated freesheet, and specialty products. Verso's paper products are used primarily in media and marketing applications, including magazines and catalogs, and in commercial printing applications such as high-end advertising brochures, annual reports and direct mail advertising.

The **Verso Quinnesec Mill** is an MVPP Star site. The mill is approximately 25 years old with three main production buildings and additional buildings for warehousing, maintenance, utilities, contractor, and office support operations.

During a recent MVPP on site review, Verso's **contractor safety procedures** were recognized as a **best practice**. The contractor safety program at the Quinnesec Mill blends accountability and teamwork to achieve continuous improvement in safety performance.

All contract companies hired to work at the mill **must** have a safety program and a designated site safety supervisor that will be on the premises while their crew is working at the site. During maintenance outages, the requirements may be increased based on the number of contract workers a company brings to the site and the number of shifts being worked.

Accountability

Contractor accountability starts with great expectations for all new contract companies. This is reinforced with clear safety instructions from the mill purchasing group during the bid process. Site safety orientation and project safety meetings provide the detailed information needed for program success.

A quarterly contractor meeting at Verso Quinnesec Mill.

Follow-up is achieved through periodic audits of the contactor's training program and their documented site safety inspection program. These audits are conducted by Quinnesec Mill EHS and Purchasing personnel. Results of inspections are shared with mill personnel responsible for the contractors, as well as the leadership of the contract companies.

Teamwork

Verso believes that teamwork begins and ends with good communication; and good communication begins with listening. A key tool used to listen to contractors is the quarterly contractor safety meetings. These meetings include mill EHS, Purchasing, Maintenance, and Operations personnel. Those contract companies having a day-to-day mill presence are invited, and asked to contribute topics to the meeting agenda.

Participation in the meetings is very good with most companies sending two to five representatives. This is each contractor's opportunity to have questions answered and obtain clarification. This keeps everyone on the same page. In addition to contributing topics, two companies are assigned the responsibility of presenting a "Best Practice."

These presentations benefit the other contractors as well as mill personnel. This is the same type of learning MVPP companies see during mentoring opportunities. The discussions and presentations during the meetings help build relationships that keep the flow of information consistent between all parties. They have helped contractors at the mill achieve continuous improvement over the past 10 years.

MIOSHA CET Division Services

To learn more about the free services offered by the MIOSHA CET Division:

- Call the Lansing office at 517.322.1809 or 800.866.4674.
- Submit a request for services electronically at www.michigan.gov/cetrca.
- Visit the CET Division website at www.michigan.gov/cet.

MIOSHA Awards

08/03/12–Commercial Tool & Die, Comstock Park–SHARP Award. Founded in 1953, Commercial Tool & Die is a leading manufacturer of plastic injection and die cast molds. They have a strong commitment to integrity and doing the right thing for customers, employees, partners, and neighbors. Living their core values in all they do is essential to their success.

Employer Honor Roll

06/27/12 – Uniform Color Company, Holland – MVPP Rising Star Award
08/10/12 – Albemarle, South Haven – MVPP Rising Star Award
09/07/12 – Cintas #324, Macomb Township – Silver Award

CAM and MIOSHA Renew Alliance

On August 2, 2012, the **Construction Association of Michigan (CAM)** and MIOSHA renewed their formal alliance to help protect the safety and health of Michigan's construction workers.

The construction industry is one of the most hazardous industries in Michigan. Only about 3.5 percent of Michigan's workforce is employed in construction – however, construction fatalities account for nearly 33 percent of all fatal workplace accidents.

The purpose of this Alliance is to increase the lines of communication between MIOSHA and CAM's 2,600 members. Improved communication, increased awareness and collaboration on safety and training initiatives will lead to a safer work environment for CAM members.

While participation by individual employers is voluntary, MIOSHA anticipates that contractors who embrace the goals of the alliance and who strive to provide a safe and healthy workplace will experience a decrease in workplace accidents and illnesses, and a decrease in workers' compensation costs.

CAM is the oldest and largest regional construction association in North America, and has been serving its members since 1885.

PMA and MIOSHA Renew Alliance

On August 17, 2012, the **Precision Metalforming Association (PMA)** and MIOSHA renewed their formal alliance to help protect the safety and health of Michigan workers in the metalforming industry. The signing ceremony was hosted by E&E Manufacturing at their Plymouth facility.

The Alliance provides a working relationship between **MIOSHA**, **PMA**, and the **PMA East** and **West Michigan Districts**, to develop and disseminate information that helps protect the safety and health of Michigan workers through outreach and communication, as well as influence employers and management to ensure that safety is viewed as a priority in the workplace.

Through participation and support of this alliance, the PMA East and West Michigan Districts will promote a "workplace free of recognizable hazards" within the metalforming industry, while improving knowledge and understanding of the fundamental requirements established by MIOSHA.

PMA is the full-service trade association representing the $113-billion metalforming industry of North America—the industry that creates precision metal products using stamping, fabricating, spinning, slide forming and roll forming technologies, and other value-added processes.

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Court Affirms 90-Day Timeline

By: Dawn C. M. Jack, Director

A Michigan Administrative Law Judge (ALJ) recently ruled upon a key limitation on MIOSHA's authority to issue a citation, commonly referred to as the "**90-Day Rule**." The Michigan Occupational Safety and Health (MIOSH) Act requires MIOSHA to issue a citation "within 90 days **after the completion of the physical inspection or investigation**."

90-Day Timeline

On May 3, 2011, MIOSHA issued a citation against E.W. Ensroth Company. The company timely contested the citation. On August 13, 2012, Ensroth filed a motion to dismiss the citation on the grounds that MIOSHA issued the citation beyond 90 days from the completion of the inspection.

Ensroth asserted MIOSHA completed the inspection on January 24, 2011, the last date the company provided information to the compliance officer. Based on this date, the 90-day timeline for citation issuance expired on April 24, 2011, and thus the May 3, 2011, citation was untimely issued.

MIOSHA contended, among other things, that the inspection was completed on the date the compliance officer conducted the closing conference. A closing conference advises the employer of the preliminary inspection findings. Using the closing conference date, MIOSHA contended the 90-day timeline to issue citations expired May 9, 2011, and therefore the May 3, 2011, citation was timely.

Court Decision

In September, **the judge concluded the citation was timely issued** and denied the company's motion to dismiss. The ALJ ruled that closing conferences are required by law under Section 29(8) of the MIOSH Act and by the administrative rules, which govern the inspection and citation processes.

The ALJ found: "…since the closing conference is mandatory it must be considered to be part of the inspection. No inspection is complete without a closing conference either happening or being declined."

The judge also agreed with MIOSHA that the usage of the closing conference date to signify the completion of the inspection is the most practical manner to determine when the clock for citation issuance begins to run. Under the rule proposed by Ensroth, the point at which an investigation ends and the clock starts running would be very hard to determine.

Since the closing conference, held with the company on February 8, 2011, marked the end of the inspection, the citation was issued within the 90-day deadline.

Variances

Variances from MIOSHA standards must be made available to the public in accordance with Part 12, Variances (R408.22201 to 408.22251). MIOSHA variances are published on the MIOSHA News website: www.michigan.gov/mioshavariances

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Standards Update

Office of Regulatory Reinvention (ORR) Update

The Office of Regulatory Reinvention (ORR) issued their final report on recommended changes to Workplace Safety Regulations in January 2012. The full report is available at www.michigan.gov/orr. The report includes recommended changes to over 600 individual MIOSHA rules. MIOSHA staff is currently implementing those changes following the expedited rule promulgation process allowed under Section 44 of the ***Administrative Procedures Act***.

The expedited promulgation steps are:

- MIOSHA prepares the draft rules.
- Draft rules are submitted to the ORR.
- ORR reviews/revises/approves the draft rules and posts on their website.
- ORR forwards the rules to the Legislative Service Bureau (LSB) for review of form and arrangement.
- Once approved by LSB, ORR publishes the draft in the *Michigan Register*. From the date of publication, **the public has 35 days to review and provide comment**.
- At the end of the 35-day period, the rules are certified and filed with the Office of the Great Seal.

There is **no requirement for a public hearing**. The step of publishing in the *Michigan Register* is the opportunity for public comment.

The revision information for each standard is on the ORR website, as well as a link to the *Michigan Register*. Public comments regarding these changes should be directed to the ORR.

Other Rule Promulgation

Occupational Health (OH) Standard

OH Part 529, *Welding, Cutting, and Brazing*, was amended as of August 23, 2012. **The changes were effective as of August 30, 2012**.

These rules establish minimum requirements for the practices and procedures to protect employees from the hazards associated with welding, cutting, and brazing. The revised standard is available on the MIOSHA Standards website, at www.michigan.gov/mioshastandards.

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Wage Payment Methods

By: Georgia Harris, Program Evaluation Manager

The ***Payment of Wages & Fringe Benefits Act***, Act 390 of 1978 is enforced by MIOSHA's Wage and Hour Division. This law allows employers four methods to pay employee wages:

- U.S. currency;
- Negotiable check or draft;
- Direct deposit or electronic transfer; and
- Payroll debit card.

If an employer pays employees through direct deposit, written consent of the employee must be obtained before deposit. An employer may require employees to receive wages only through direct deposit or payroll debit card if the employer has provided the employee with written notice. This written notice must allow the employee the option of direct deposit or debit card.

Failure of the employee to provide the employer with account information for direct deposit will result in the employee receiving wages through a payroll debit card. If the employee currently is paid by direct deposit, the method of payment shall not be changed to payroll debit card without written consent of the employee.

If payroll debit card is the method of payment, the employer **must** provide:

- Written disclosure of the terms and conditions for use, including an itemized list of any and all fees;
- Methods for accessing wages without charge;
- A statement that, if the debit card is used outside the specified ATM network, both the card issuer and the ATM operator may impose charges;
- Methods to obtain free balance inquiries;
- Notice of the employee's right to elect to change the method of receiving wages at anytime; and
- Notice that the payroll debit card does not provide access to a savings or checking account.

An employee may change the method of payment (from direct deposit to debit card or reverse) at any time. The employer shall take no longer than one pay period to implement the change after receiving the change request and any information necessary to implement the request.

For more information, contact the Wage and Hour Division of MIOSHA at www.michigan.gov/wagehour, 517.322.1825, or 313.456.4906.

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MIOSHA Training Institute (MTI) Course Changes

By: Sheila Ide, CET Supervisor

When conditions in safety and health disciplines change or Michigan OSHA regulations are revised, MIOSHA staff is able to update MTI classes quickly.

For example, Michigan's **Office of Regulatory Reinvention** worked closely with the public, employer and employee stakeholders, and MIOSHA staff to review all MIOSHA standards. As a result, changes to over 600 individual MIOSHA rules are anticipated to be made before the end of 2012. Although not all changes impact the current MTI programs, course champions are reviewing their significance and updating programs as necessary, to provide students with the most current standard interpretations.

Adoption of the **Global Harmonization System (GHS)** has resulted in significant modifications to the *Hazard Communication* standard. Some of the changes include new terminology, more extensive and descriptive labeling, standardization of "Safety Data Sheet" formats, and deadlines for employee training and manufacturer compliance. Students taking the MTI class "*Hazard Communication & Right to Know Requirements*" will receive the latest information and be able to implement the updates in their workplaces.

New requirements for Construction Standard **Part 10, *Lifting & Digging Equipment***, will require employers to perform a pre-erection inspection of tower crane parts; use synthetic slings in accordance with manufacturer's instructions during assembly/disassembly work; assess ground conditions; certify crane operators; qualify riggers and signal persons; and develop procedures for working near power lines. These new requirements will be addressed in the MTI construction class "*Part 10-Lifting & Digging Equipment: Construction Cranes & Rigging*" to be piloted in January 2013.

Another program piloted this summer was the **MTI Boot Camp**. The MTI Boot Camp fulfills *Level One* certificate requirements in three weeks. Twenty-three graduates completed six MTI courses to earn *Level One General Industry* certificates in July. More boot camps will be held this coming year.

2012 MTI Level One "Boot Camp" graduates.

MTI website: www.michigan.gov/mti

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The Mission of the MIOSHA Program is: **To Protect Employee Safety, Health and Worker Rights.**

The MIOSHA News is a publication of the MIOSHA program. Its purpose is to educate Michigan employers and employees about workplace safety and health and we encourage reprinting.

The Department of Licensing and Regulatory Affairs (LARA) is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request.

Website: www.michigan.gov/lara

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