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MIOSHA news

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DIRECTOR's *corner*

Martha Yoder
Director

"Front line supervisors are the linchpin of any safety program and how they lead and communicate are among the most important factors in determining safety climate on the jobsite…"

This statement is from a new National Institute for Occupational Safety and Health (NIOSH) report, "Safety Culture and Climate in Construction: Bridging the Gap Between Research and Practice."

For many with experience in the construction industry, these statements may not be a surprise but serve as a good reminder.

Our Michigan Voluntary Protection Program for Construction and partnership companies provide great best practices. Some examples include:

Walbridge Construction uses safety posters and banners at the shop trailer and throughout the jobsite as reminders. Pre-Task Analysis is used for each task. Daily safety huddles provide the opportunity to evaluate work processes, ask questions, and identify hazards quickly.

Walsh Construction's initiatives for a five-year project include: New employee site orientation for all. Job Hazard Assessments (JHAs) for all work tasks prior to start of work. Daily task hazard assessments completed by the subcontractors, weekly subcontractor toolbox meetings are held, and safety audits are conducted daily.

The 2014 construction season is expected to be prosperous. We urge you to take time as you gear up to ensure it is a safe season by setting the tone through positive, proactive job site safety and health initiatives that send construction workers home unharmed!

2009 – 2013 Strategic Plan Results

Ron Ray, Director
Technical Services Division

In 2013, MIOSHA completed its third 5-year strategic plan. This plan contained three goals: help assure improved workplace safety and health for all workers as evidenced by fewer hazards, reduced exposures, and fewer injuries, illnesses, and fatalities; promote employer and worker awareness of, commitment to, and involvement with safety and health to effect positive change in the workplace culture; and strengthen public confidence through continued excellence in the development and delivery of MIOSHA services.

For Goal #1, reducing injuries and illnesses by 20 percent: MIOSHA exceeded its goal for the following industries: Plastics and Rubber Products Manufacturing, Nonmetallic Mineral Product Manufacturing, and Fabricated Metal Product Manufacturing. There were significant reductions in Wood Products Manufacturing, Machinery Manufacturing, Transportation Equipment Manufacturing, Hospitals, and Construction injuries. There were increases in Beverage and Tobacco Products Manufacturing, Primary Metal Manufacturing, and Merchant Wholesalers/Nondurable Goods. The industries that did not meet the 20 percent reduction goal were added to the next strategic plan for continued emphasis. MIOSHA exceeded the goal of reducing fatalities by 20 percent in the Manufacturing and Construction industries.

For Goal #2, promoting employer and employee awareness and commitment to changing workplace culture: MIOSHA was successful in promoting Safety and Health Management Systems in 100 percent of all interventions, exceeded the goal of increasing MIOSHA Training Institute attendance by 50 participants per year by nearly 400 percent, and saw increases in all the cooperative programs.

For Goal #3, strengthening public confidence in programs and services: MIOSHA surveyed employers and determined that 98.5 percent of all interventions were deemed "Useful" by its customers, responded to 98.6 percent of all complaints within 10 days, and responded to 100 percent of all fatalities and catastrophes within one working day.

Customer Service Survey

At the end of each of the three strategic plans, MIOSHA has surveyed customers. MIOSHA distributed the surveys from June through September 2013 with all closing letters sent to employers. The same survey questions have been asked at the end of each strategic plan to track progress. Below is a summary of and comparison of previous surveys:

2009–2013 Strategic Plan Results, (Cont'd)

Each of the surveys asked the same questions yielding the following results:

2002 % positive	2008 % positive	2012 % positive	Question
90.3	94.9	95.0	How accessible is MIOSHA information?
89.5	92.3	92.8	How applicable are MIOSHA rules in safety and health you deal with in your workplace?
82.1	89.9	90.0	How satisfied are you that MIOSHA programs and services are effective in identifying and correcting workplace hazards and exposures?
85.3	92.1	95.6	How professional are MIOSHA staff in carrying out their duties?
85.6	93.08	91.2	How useful is MIOSHA safety and health information in preventing serious workplace injuries and illnesses?
80.8	90.9	91.6	How confident are you that MIOSHA brings about improvement in workplace safety and health?
87.8	93.2	95.0	How knowledgeable do you believe MIOSHA staff are in carrying out their duties?
91.2	93.7	95.6	How willing are you to rely on information provided by MIOSHA for workplace safety and health solutions?
79.8	89.1	94.0	Do MIOSHA representatives address your concerns to your satisfaction?
79.7	88.5	87.9	How do you rate the overall quality of MIOSHA programs and services?

Continue to Provide Feedback

We value and appreciate all of the feedback received. MIOSHA's commitment is to continually work diligently in our efforts to connect MIOSHA to industry through a more collaborative and informative approach. Please continue to provide us with your thoughts and suggestions.

CONNECTING UPDATE

Bart Pickelman, CIH,
Deputy Director

Connecting Through Continuous Improvement and Coffee!

Continuous improvement is one example of our **Connecting MIOSHA to Industry** efforts. MIOSHA is committed to delivering services in the most efficient manner possible. As part of Governor Snyder and the Department of Licensing and Regulatory Affairs (LARA) Reinventing Performance in Michigan (RPM) initiative, MIOSHA has ramped-up continuous improvement efforts within the agency.

The goals of RPM projects are improved response time, reductions in the number of forms, and improved customer satisfaction with regulatory processes. RPM is a metric-driven customer service model that utilizes LEAN methods and tools to accomplish the goal of refining the regulatory system and improving the manner in which services are provided.

MIOSHA has identified three continuous improvement projects to focus on initially. Continuous improvement teams have been formed to address the first two projects and work is beginning on the third project.

Project #1: Streamline the Informal Settlement Agreement (ISA) process. The ISA is one settlement option for an employer who receives citations and penalties as a result of an enforcement case. ISAs are designed to expedite the abatement of hazards and, in turn, offer the employer a reduction in penalties. The current ISA process involves hard copy paper documents exchanged via the U.S. Mail. The goal is to create a more timely and user friendly online electronic system.

Project #2: Streamline the Freedom of Information Act (FOIA) request process. Under FOIA the public has the right to file FOIA requests to obtain documents that are part of the public domain. The goal of this project is to develop a FOIA process that improves the ease of submitting requests and speeds-up the response times.

Project #3: Review the current two-step appeal process for enforcement cases. This project will review the current two-step appeal process to determine whether it is still useful and if there are efficiencies that can be implemented to improve the process. One option may be to streamline the system to a one-step process that preserves the appeal rights of interested parties. We are currently meeting with customers to gather input and feedback.

Coffee with MIOSHA events are another example of the agency's connecting efforts. The events provide opportunities for employers and employees to meet with MIOSHA staff in an informal setting to answer questions and to learn about the services MIOSHA provides, and establish rapport with MIOSHA staff. The Coffee with MIOSHA events are hosted by sponsors from across the state and staffed by MIOSHA representatives from various program areas including Health and Safety Enforcement, Consultation, and Wage and Hour.

Connecting Through Continuous Improvement and Coffee *(Cont'd)*

Coffee with MIOSHA Dates:

May 1, 2014	Michigan Infrastructure and Transportation Association (MITA)	Okemos
May 29, 2014	American Society of Safety Engineers — West Michigan Chapter	Grand Rapids
June 5, 2014	Schoolcraft College VisTaTech Center	Livonia
June 26, 2014	Northern Michigan University	Marquette
July 22, 2014	Hearthside Foods	Kentwood
July 29, 2014	Great Lakes Safety Training Center	Midland

For more information and exact locations of the Coffee with MIOSHA events, visit the **MIOSHA website**.

Paying it Forward…
Elzinga and Volkers Hosts Free Training for West Michigan Contractors

Patty Meyer, Director,
Construction Safety and Health Division

Giving back and paying it forward is what leadership is all about. Elzinga and Volkers (E&V) exemplified their leadership in the construction industry with **"Alive 365: Safety Week 2014,"** a week of free training sessions for west Michigan contractors. Over 270 workers attended the training sessions, representing 72 contractors. The purpose of this event was to raise awareness around the importance of safety practices and increasing education on risk prevention tactics in the construction industry. They challenged each contractor to 365 days without a lost time incident. E&V hit a milestone that week with 2,500 consecutive days without a single lost-time injury!

The event kicked off on March 21, 2014 with a **Symposium on Safety** at the Pinnacle Center in Hudsonville with representatives from MIOSHA, Associated Builders and Contractors of West Michigan, American Subcontractors Association of Michigan, contractors and vendors. The overall message of the symposium was to highlight the importance of incorporating a strong safety and health culture into company business plans.

E&V President and CEO Mike Novakoski and Vice President of Operations and Safety Director Tony Roussey facilitated the event, they shared many best practices and lessons learned about developing and integrating a positive safety culture within their company. They reminded everyone of how the image of the "construction worker" has evolved over the past 20 years. Today — professionalism, quality, safety mindedness and projecting a positive image of the employer's values and corporate structure are expectations for their employees working in the field.

Having a good safety culture is not only the right thing to do to protect your employees… it's just good business! It will positively impact job revenue and the bottom line. Fewer incidents will lower a company's Experience Modification Rate (EMR) which translates to:

- Lower workers' compensation insurance premiums
- A way to market your company to clients as a cost-reliable partner
- Added project opportunities by meeting owner EMR requirements
- Increased company production
- Avoiding costly lawsuits

Dedicating resources and investing in employees should also be part of a company's safety culture. If you take care of your employees and put them first, they will in turn treat clients well and make a positive impact on their job sites. Important components of a successful safety program include:

- Developing a safety committee to foster safety awareness
- Training on-site supervisors to perform weekly job site inspections
- Conducting tool box talks relevant to the work being performed
- Hiring a third party to audit job sites

One best practice that E&V uses is the free on-site services from MIOSHA's Consultation Education and Training (CET) Division. These services help to ensure a safe work site and save companies from paying costly fines.

Communication is one of the most effective ways to influence a company workforce's dedication to safety. As part of a good safety program, E&V suggests companies hold a regular company-wide safety meeting to educate employees on safe practices, as well as recognizing and celebrating safe behavior on the jobsites.

Presenters also spoke about the consequences of **NOT** having a good safety culture. Representatives from two companies shared their stories about the negative effects and impact that resulted from a worker fatality. Employee morale suffered, work production suffered, contracts were lost and there was a significant loss in revenue. The emotional toll and economic impact on these companies still continues.

E&V is currently partnering with MIOSHA on the Spectrum Health ICC Beltline project in Grand Rapids. See all the active MIOSHA construction partnerships and some of their best practices on the **MIOSHA Website**.

Paying it Forward… (Cont'd)
Elzinga and Volkers Hosts Free Training for West Michigan Contractors

Scaffold training course at "Alive 365: Safety Week 2014"

Attendees listening to speakers at the Symposium on Safety

Residential Construction Initiative

By Patty Meyer, Director, Construction Safety and Health Division

MIOSHA, in partnership with the Home Builders Association of Michigan (HBA of Michigan), has launched a Residential Construction Initiative to assist employers in protecting their workers from the most common hazards associated with residential construction. The initiative will be in effect for one year, from May 15, 2014 through May 15, 2015.

37 percent of construction fatalities in Michigan have occurred in the residential industry.

Residential construction has been experiencing moderate growth during the past few years which has contributed to higher injury rates and fatalities for construction in Michigan. According to the U.S. Bureau of Labor Statistics, the total case incidence rate (TCIR) for the Michigan construction sector increased from 2.6 injuries and illnesses per 100 full-time workers in 2011 to 5.0 in 2012. Over the last five years **37 percent of construction fatalities in Michigan have occurred in the residential industry.** The key components of this initiative are:

- **A Residential Construction Local Emphasis Program (LEP)** – Focusing resources on inspections of single and multi-family home construction. Inspections will focus on the "Top 5" serious hazard categories commonly associated with residential construction. The "Top 5" categories are:

  1) Falls

  2) Scaffolds

  3) Ladders

  4) PPE/Tool Guarding

  5) Electrical

  A Residential Inspection Checklist and information guide to assist the employer in identifying common hazards will be distributed during inspections.

- **New Website**
  A new webpage has been developed to provide residential employers and employees with an easy one-stop link to access residential-specific information, (e.g., case studies, fact sheets, toolbox talks, training materials and seminars, and webcasts.) See it at: **www.michigan.gov/miosharesidential.**

- **Seminars**
  The MIOSHA Consultation Education and Training (CET) Division and the HBA of Michigan are offering "Safety in Residential Construction" seminars through local home building chapters around the state. For more information contact the CET Division at 517-322-1809 or go to: **www.michigan.gov/mioshatraining.** Go to the HBA Michigan website at **www.buildingmichigan.org** and click on the education link to see a list of seminars offered by local home builder associations.

- **Building Up Residential Safety Day — August 14, 2014**
  Residential contractors across Michigan are invited to participate in a special Building Up Residential Safety Day on August 14, 2014. MIOSHA compliance and consultation staff will visit Michigan residential worksites. These visits will focus on specific hazards/areas as requested by the employer. There will be NO CITATIONS and NO PENALTIES for participating residential workplaces. Participants must register to participate and agree to correct all serious conditions. Call MIOSHA to register and set up the time and place to visit one of your worksites. The deadline to submit a request is July 23, 2014.

MIOSHA and HBA of Michigan have sent letters to more than 4,900 Michigan residential contractors during this initiative to assist them in identifying and correcting hazards that are common in residential construction and to protect themselves and their employees.

Residential Construction Initiative *(Cont'd)*

A roofer is protected from falling from the roof with the use of a personal fall arrest system and wearing appropriate safety boots, hard hat, and eye protection.

Carpenters are protected by guardrails while framing a residence. Both are wearing hard hats and eye protection while operating a pneumatic nail gun.

(Partnering with MIOSHA)

Anthony Casaletta, M.S., Construction Health Supervisor
Construction Safety and Health Division

Welcome to Spring – Another Safe and Productive Construction Season

Winter is finally over and we here at MIOSHA are ready to welcome Spring and another safe and productive construction season! MIOSHA is in the process of revising its **Partnerships for Worker Safety and Health** agency instruction. The timing of the revision couldn't be better, as the MIOSHA Partnership Committee met on April 2, 2014, to discuss the status of current partnerships, emerging trends in the construction industry, and how to best manage the ever increasing number of partnership requests. The MIOSHA Partnership Committee consists of representatives from the Construction Safety and Health Division (CSHD), Consultation Education and Training (CET) Division, and key company personnel from current and past construction partnerships. The semi-annual meetings are rotated among the active partnerships. This recent one was hosted by Pioneer Construction at the Grand Valley State University Mary Edema Pew Library, and included a tour of the Biology Lab and Market Place, a new MIOSHA/Pioneer partnership project. This is the fifth time over the past three years that the MIOSHA Partnership Committee has met.

This new system is designed to provide more flexibility for MIOSHA staff; create more opportunities for companies to partner with MIOSHA and establish

The revised instruction will incorporate a "three-tiered" system for all new partnerships. This new system is designed to provide more flexibility for MIOSHA staff; create more opportunities for companies to partner with MIOSHA and establish high expectations for companies who have previously had a MIOSHA partnership.

Level 1 partnerships will be for employers who require, or want, more training and assistance;

Level 2 partnerships will be for employers who already have an established and effective safety program and are looking to "raise the bar" on safety at a specific project.

Level 3 partnerships will be for employers who have had a prior MIOSHA partnership experience. Level 3 employers will be expected to mentor other partnering companies and create a safety and health tool or resource that can be used by others in the construction industry.

Since its inception several years ago, MIOSHA has experienced tremendous success with their construction partnerships. Partnered sites often have Total Case Incidence Rates (TCIR) and cases with Days Away, Restricted, and Transferred Rates (DART) significantly lower than the industry average. Lowered injury and illness rates are not the only benefit of these partnerships; the increased presence by MIOSHA during quarterly meetings, and the dedication of the involved contractors help foster a strong culture of health and safety that is often taken to non-partnership job sites by those involved. This ripple effect is what these partnerships are essentially about; bringing health and safety to the forefront through participation and cooperation by all those involved. For more information on MIOSHA Partnerships, please visit **the MIOSHA Website**.

Harvey Johnson, CIH, Senior OnSite Consultant
Consultation Education and Training Division

Using Patient Lift Equipment Saves Money (and Backs)

Many healthcare and nursing home facilities have instituted "No manual lifting" policies. This is because numerous studies and many health caregivers have concluded that manual moving and lifting of many patients/nursing home residents is not possible without injuring employees. To protect caregivers, equipment such as electric lifts, beds, and sit/stand devices must be employed to move patients who can't move themselves.

Last fall, MIOSHA co-sponsored a forum at the University of Michigan Center for Occupational Health & Safety Engineering called "Protecting the Caregivers—Preventing Injuries in Nursing and Residential Care Facilities." One of the eight speakers was Mike Lampl, a certified professional ergonomist (CPE) with the Ohio Bureau of Workers Compensation (BWC). Mike described how the BWC offers Safety Grants to businesses in Ohio who pay into the workers compensation insurance fund. The grants provide up to $40,000 if there is a demonstrated problem, there is a solution that equipment can solve, and the facility will share their cost and injury data.

A recent study of 120 healthcare facilities in Ohio that received grants to purchase equipment found that the equipment almost immediately reduced the number of employee injuries and lost days. This saved dollars by not having to treat caregiver injuries and not having to pay people who were injured and not at work. Counting injury prevention and employee turn-over reduction, the return on investment (ROI) was 1.1 years. The new equipment paid for itself in approximately one year. The equipment continued to prevent caregiver injuries year after year. Equipment such as electric beds, hi-low platforms, floor lifts (total lifts, sit/stand lifts, ambulatory lifts), and ceiling lifts were the most common type of purchased and implemented devices.

The take away is that some form of lifting equipment is usually necessary in healthcare settings for moving non-ambulatory patients/residents, and it is well worth the investment. No matter how many staff may be assigned, manual lifting will be a hazard to the employees and likely to the patient/resident. Manual lifting is the last choice when moving patients but if necessary, should be done by more than one employee. A variety of lifting equipment exists for the healthcare setting and once put into service, the equipment will pay for itself very quickly. All employees can benefit from the proper design and the appropriate tools for the job in the workplace; this is the economic advantage of ergonomics.

Floor lift used to move patients

Floor lift used to move patients

Bruce Matkovich, Manager
Radiation Safety Section

Facility for Rare Isotope Beams Breaks Ground at MSU

On March 17, 2014, MIOSHA participated in the ceremonial groundbreaking for the **Facility for Rare Isotope Beams (FRIB)** on the campus of Michigan State University (MSU). There were a number of dignitaries in attendance including U.S. senators Carl Levin and Debbie Stabenow. The FRIB will be a new national user facility for nuclear science funded by the U.S. Department of Energy Office of Science and will be operated by MSU.

As the name implies, the Facility for Rare Isotopes will enable scientists to study the properties of rare isotopes to advance their research into nuclear structure and apply this knowledge to applications in medicine and industry. Isotopes are variations of elements that have the same number of protons but differ in the number of neutrons in the nucleus. If neutrons are added to or subtracted from a stable nucleus, it can become unstable and want to decay to a more stable form. Some isotopes exist for only fractions of seconds before they decay into a more stable form and are not normally found on earth. These are the rare isotopes FRIB scientists will study.

The facility will use a high-powered super conducting linear accelerator to accelerate stable nuclei at half the speed of light to strike a target. When the beam hits the target, the nuclei in the beam are fragmented from the collision and produce reaction products, some of which are rare isotopes. The collision of the beam with the target also releases energy in the form of ionizing radiation. This makes the accelerator a radiation machine and puts it under the regulatory purview of the Radiation Safety Section (RSS) of MIOSHA.

Since 2012, RSS has been meeting periodically with the health physics staff working on the design of the FRIB. These meetings were primarily to ensure that the shielding design will meet public and radiation worker regulatory dose limits. The last set of shielding calculations submitted by the FRIB staff indicated that the dose constraints used in the design are currently set at 10 percent of the regulatory limit for uncontrolled areas accessible to members of the public and 40 percent of the regulatory limit for radiation workers. These are both very conservative design limits which should ensure dose limits are not exceeded even under unusual circumstances. Before being issued a registration certificate which allows operation of the FRIB, the review of the proposed shielding design will need to be completed and approved by RSS staff. The facility will also need to agree to a list of registration conditions that cover items such as monitoring personnel for radiation, maintaining portable radiation monitoring instruments, installing alarms, warning indicators, scram buttons and safety interlocks to prevent access to high radiation areas and insuring adequate training of personnel. These reviews and approvals should be complete by the end of 2015.

In addition to the science benefits, this project will be beneficial to the economy of the state, providing thousands of construction jobs and several hundred full-time science and managerial jobs at the facility.

FRIB Groundbreaking

Jennifer Clark-Denson, Senior Safety Consultant
Consultation, Education and Training Division

Temporary Workers — A Shared Responsibility

The use of temporary workers is becoming increasingly common in today's economy. When a staffing agency supplies temporary workers to a business, typically, the staffing agency and the host employer are joint employers of those workers. Both employers are responsible to some degree for determining the conditions of employment. Temporary employees get placed in a variety of jobs including the most hazardous work environments. All workers have a right to a safe and healthy workplace. In this shared employment structure, staffing agencies and the host employer must recognize they are both responsible for safety and health protections on the job.

Examples of some shared safety and health responsibilities may include:

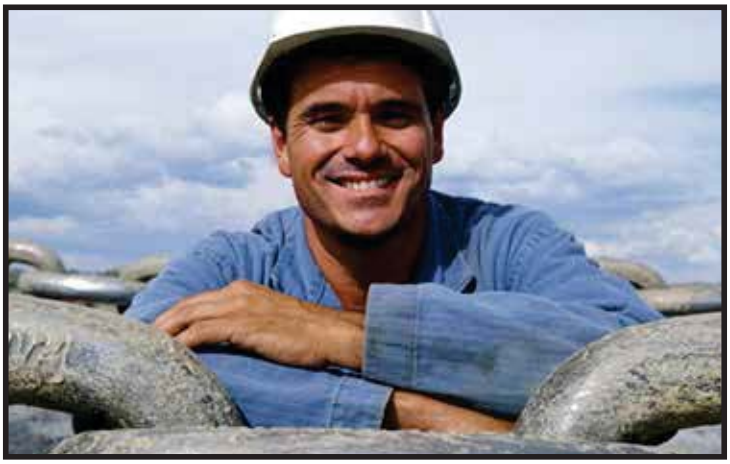
- **Hazard Communication**
  - Staffing agency trains on generic program elements (ex. safety data sheets and labelling)
  - Host Company trains on site specific program elements and the specific chemicals used
- **Lockout Tagout**
  - Staffing agency may provide awareness level training
  - Host company (if applicable) provides machine specific energy control procedures
- **Emergency Action Plans**
  - Staffing agency trains on generic program elements (ex. means of reporting emergencies and alarm system requirements)
  - Host company provides site specific routes of exit, local emergency contact numbers and alarm notifications
- **Accident Reporting**
  - Staffing agency may provide procedures for obtaining treatment for on-the-job injuries and illnesses: what and when to report
  - Host company records injuries/illnesses for directly supervised temporary workers

MIOSHA's new strategic plan covering FY 2014-18 includes the goal of reducing the rate of worker injuries, illnesses, and fatalities within the temporary worker population. MIOSHA is including increased outreach and consultation with temporary employment agencies as part of the new strategic plan. Under this emphasis, we will be seeking opportunities to partner with the industry to encourage proactive attention to improve safety and reduce fatalities in all types of work operations.

Some of the outreach opportunities identified include:

- Developing and presenting training on the new MIOSHA Temporary Worker Initiative;
- Assisting staffing agencies in developing safety and health management systems;
- Developing a MIOSHA fact sheet identifying the shared responsibilities between the temporary agency and host employer; and
- Authoring safety and health articles for the industry's publications.

For more information on the Consultation Education and Training Division, please visit the **MIOSHA website.**



Gerry Dike, Disaster Response Administrator
General Industry Safety and Health Division

Isocyanates — New OSHA National Emphasis Program

In 2013, OSHA established and published a new National Emphasis Program (NEP) titled "OSHA Instruction CPL 03-00-017 —National Emphasis Program—Occupational Exposure to Isocyanates." The NEP became effective for OSHA on June 20, 2013. MIOSHA adopted the OSHA NEP on Occupational Exposure to Isocyanates effective December 12, 2013.

The NEP combines outreach and enforcement to raise awareness of employers and workers, as well as safety and health professionals on the serious health effects associated with occupational exposure to isocyanates.

The potential health effects of occupational exposure to isocyanates include work-related asthma (hypersensitivity pneumonitis), irritation of the skin (dermatitis) and mucous membranes (eyes, nose, and throat), and chest tightness. Isocyanates include compounds also classified as potential human carcinogens and known to cause cancer in animals. Workers in a wide range of industries and occupations are exposed to at least one of the numerous isocyanates known to be associated with work-related asthma.

Some work activities that may result in exposure to isocyanates include painting, blowing foam insulation, as well as the manufacturing or thermal degradation of many polyurethane products such as polyurethane foam, insulation materials, car seats, furniture, foam mattresses, under-carpet padding, packaging materials, shoes, laminated fabrics, polyurethane rubber, paints, coatings, and adhesives.

MIOSHA will conduct inspections under the Isocyanates NEP based on complaints and referrals. Programmed inspections will be conducted at approximately 40 randomly selected workplaces with potential occupational exposure to isocyanates based on industry SIC/NAICS codes as identified in OSHA CPL 03-00-017.

Prior to commencing enforcement activity, letters were sent to the facilities to advise them of the NEP and offer consultation, education and training services. MIOSHA Consultation Education & Training (CET) Division has initiated outreach activities for workplaces in Michigan under the Isocyanates NEP with the aim of reducing serious health effects associated with occupational overexposure to isocyanates. For more information on this program, contact the MIOSHA CET Division.

Fatalities Summaries

General Industry Safety and Health Division Powder and Electrophoretic (e-coat) Coating of Metal Parts —Crush

On September 6, 2013, at approximately 2:15 a.m., an employee was removing parts that had fallen into a pit during automatic operation of a transfer cart on a conveyor line. The employee was caught between a horizontal beam and the lower portion of the transfer cart. The employee suffered fatal crushing injuries.

The company was cited for the following MIOSHA violations:

- Part 85, The Control of Hazardous Energy Sources, Rule 1910.147(c)4(i) – No lockout procedure developed or implemented for entry into transfer cart area.
- Part 85, The Control of Hazardous Energy Sources, Rule 1910.147(c)7(i)(A) – No training for employee performing authorized maintenance and clean-up activities.

Construction Safety and Health Division Roofer—Fall

On January 31, 2014, at approximately 10:25 a.m., eleven employees were stripping and replacing the shingles on the north side of an 8/12 pitched roof of a single family residence. Just prior to the fatal fall, three employees went over to the south side of the roof to remove snow and begin tearing off the shingles. One of the employees started to remove shingles while the other two employees were waiting until cleats were installed. The employee started slipping as he was pushing a pile of shingles to the eave and then fell off the roof approximately 20 feet to the ground below. The employee was transported to the hospital and passed away 12 days later from the injuries he suffered.

The company was cited for the following MIOSHA violations:

Part 1, General Rules

- 408.40114(1)(a) No accident prevention program
- 408.40132(3) No person onsite with a valid first aid certificate

Part 45, Fall Protection

- 1926.501(b)(13) No fall protection in use during residential roofing activities
- 1926.503(a)(1) No fall protection training provided to employees

Part 1, Record Keeping

- 408.22129(1) Employer did not maintain injury & illness records

View of roof location where victim fell 20 feet.

Elaine Clapp, B.S., Safety and Health Manager, General Industry Safety and Health Division
and Paul Wrzesinski, Safety Manager, Construction Safety and Health Division

What is the Severe Violator Enforcement Program (SVEP)?

The MIOSHA Severe Violator Enforcement Program (SVEP) is patterned after the federal OSHA SVEP initiative. This initiative concentrates MIOSHA's resources on inspecting employers who have demonstrated indifference or reluctance to fulfill their obligations under the Michigan Occupational Safety and Health Act. An instruction has been developed which establishes enforcement procedures and policies for this program and applies to compliance inspections conducted by the Construction Safety and Health Division (CSHD) and the General Industry Safety and Health Division (GISHD).

The SVEP initiative focuses on enforcement inspections where the employer is issued willful (W), repeat (R), or fail-to-abate (FTA) citations for not protecting employees. There are four criteria that result in an inspection being considered as a severe violator enforcement case.

- A catastrophe or fatality inspection with violations of any MIOSHA standards/rules.
- Non-fatality inspections involving high-emphasis hazards that are addressed by specific MIOSHA standards/rules, and have high-gravity serious citations.
- Citations related to the release of highly hazardous chemicals addressed under the Process Safety Management Standard.
- Egregious (instance-by-instance) citations.

High-emphasis hazards that are described in the SVEP instruction are the same as those for federal OSHA: fall hazards (construction and general industry), amputation hazards (general industry), combustible dust (general industry), crystalline silica (construction and general industry), lead (construction and general industry), and excavation/trenching hazards (construction). Specific standards/rules that address these hazards and come under the SVEP criteria are identified in the SVEP Instruction. See the instruction for complete details on which specific rules are under the scope of SVEP and a description of other procedures related to SVEP inspections. **(SVEP Instruction)**

SVEP inspections may result in enhanced settlement agreements, follow-up inspections at the same site, and additional inspections at similar worksites for each company. In construction these settlements can include additional reporting of future worksites, enhanced training for employees, and development of an enhanced company safety and health management system.

Kelly Gentner, Safety Supervisor,
General Industry Safety and Health Division

Severe Violator Enforcement Program (SVEP) Case Study

An inspection of a metal product manufacturer in 2012, resulted in 22 serious and 14 other-than-serious citations. The employer did not submit satisfactory abatement for all the serious citations even after several attempts were made to collect that information. This resulted in a follow-up inspection which confirmed that the violations had not been corrected. The uncorrected violations resulted in nine serious and three other-than-serious failure-to-abate citations with a significantly higher penalty compared to the original assessed penalties. These violations, still posing a hazard to employees, were related to employee training on mechanical power presses; inspection programs for presses; guarding; safety distance; die-setting procedures; lockout training; and lockout periodic inspections. During the follow up inspection, additional safety hazards were identified for:

- **lack of guards**
- **personal protective equipment**
- **guards for presses and posting of the citations**

This inspection resulted in two serious, two repeat serious and one other-than-serious citations. The total monetary penalty for both cases was over $100,000. Both inspections qualified the company for the SVEP due to two or more high-gravity repeat serious and failure-to-abate citations for amputation hazards.

In accordance with the protocol for the SVEP, a copy of the citations was sent to the owner of the company. The company entered into an enhanced settlement agreement to settle this case. This agreement required the company to hire a health and safety professional, provide the division updates as to their compliance, submit their injury and illness log quarterly, and agree to an inspection based off of those review logs.

Dawn C. M. Jack, Director
Appeals Division

Hearing Decision: Creating Employer Docket No. 13-010455-MIOSHA

A hearing decision was issued in April 2014, which serves as a reminder of the responsibilities of an employer who creates a hazardous condition for another employer's employees. The case involved an inspection of an excavation conducted by the Construction Safety and Health Division. A violation of Rule 941(1) of Construction Safety Standard Part 9, "Excavation, Trenching and Shoring" was issued. The citation was classified as Serious with a proposed penalty of $125.

Rule 941(1) requires an employer to slope the sides of an excavation more than five feet deep to specific angles based upon the soil type. The sloping is required to protect employees from cave-ins unless the excavation is otherwise supported by things like a trench box or shoring system. Cave-ins are one of the top five leading causes of construction work-related fatalities in Michigan.

During the inspection, the MIOSHA compliance officer observed a person working inside an improperly sloped excavation for a water main project. The worker was not protected by any shoring system or trench box. The compliance officer learned that the worker in the excavation was an employee of a subcontractor hired to tap into the water main. A different subcontractor was responsible for digging the excavation.

Both the subcontractor performing the water main work and the subcontractor who dug the excavation were cited based upon MIOSHA's Agency Instruction MIOSHA-COM-04-1R3, Multi-Employer Work Sites. Under the instruction, four types of employers may bear some liability for violations of MIOSHA health and safety standards:

- controlling employer;
- creating employer;
- exposing employer; and
- correcting employer.

After a hearing on the citation issued to the excavation subcontractor, the Administrative Law Judge issued a decision upholding the citation and penalty. The judge agreed that the subcontractor had created a hazard by digging the excavation in a manner that did not comply with the standard. The judge's decision noted "a subcontractor who creates hazards for the employees of fellow contractors at multi-employer work sites is liable under the occupational safety laws."

To learn more about an employer's responsibilities when working on a multi-employer work site visit the **MIOSHA website**.

Anthony Casaletta, M.S., Construction Health Supervisor
Construction Safety and Health Division

Asbestos Symposium Provides Update to Industry

On March 13, 2014 the MIOSHA Asbestos Program sponsored a day-long Asbestos Symposium at the Michigan State Police Training Academy in Lansing. The symposium was well attended and focused on providing information to asbestos training providers and asbestos abatement contractors who perform asbestos-related work activities throughout the state.

During the symposium, the audience was able to meet key individuals involved in the training and enforcement of the asbestos regulations. MIOSHA and Department of Environmental Quality's National Emission Standard for Hazardous Air Pollutants (NESHAPs) program managers provided updates on their respective programs. The MIOSHA Asbestos Program administrative staff presented a review of past, present, and future online services; MIOSHA and NESHAP's field staff presented case studies; and representatives from the CET Division interacted with the attendees. The symposium concluded with a question and answer session.

The attendees thought the question and answer session was the most valuable aspect of the symposium. One commented that he liked how the differences between MIOSHA and NESHAPs rules were explained and clarified. Another attendee liked how examples were given during the presentations to help understand the regulations. A list of the questions and answers for the session is posted on the MIOSHA Asbestos Program website at **www.michigan.gov/asbestos**.

Question and answer session during the 2014 Asbestos Symposium.

Robert Dayringer, CIH Senior Industrial Hygenist
Consultation, Education and Training Division

Sulfer Dioxide Exposure Control at Fruit Processing Plant

One of the responsibilities of the MIOSHA CET Onsite section is to help employers abate citations by providing compliance assistance. A recent interesting Onsite Health case involved a fruit processor in northern Michigan. Employees had excessive exposure to Sulfur Dioxide (SO_2).

SO_2 gas is highly soluble, dissolving in moisture upon contact. Significant exposure can cause eye and respiratory system damage. In the respiratory system, SO_2 dissolves in the mucous membranes to form sulfuric acid. Sulfuric acid is corrosive, irritates the respiratory tract, and can cause bronchitis as well as an increased resistance to air flow caused by the inflammatory narrowing of airways. Ultimately, long term exposure to SO_2 can cause reactive airway disorders, occupational asthma, and obstructive pulmonary disease.

Sulfur Dioxide has an eight-hour Time Weighted Average (TWA) exposure limit of two parts of SO_2 per million parts of air (ppm). It also has a Short Term Exposure Limit (STEL) of five ppm measured over a 15-minute period. During the compliance investigation, SO_2 monitoring results revealed that employee TWA exposures measured as high as 5.7 ppm, and the STEL exposure as high as 23.7 ppm. Thus, employee SO_2 exposures were well above the allowable health limits. The employees with the highest exposures to SO_2 gas were the dump tank operator, and the fork lift truck operator who transferred totes of fruit into the dump tank.

Fruit waiting to be processed is stored in sealed totes with brine. Sodium metabisulfite is used as a preservative in the brine. Sodium metabisulfite breaks down to produce SO_2.

At this facility, incoming totes of brined fruit are transferred to dump tanks and conveyed to large bleaching or processing tanks. At this point some of the SO_2 gas that was dissolved in the liquid brine bubbles out, becoming an airborne contaminant hazard. This is similar to opening a bottle of pop. If you do not shake the pop, the dissolved carbon dioxide (CO_2) gas stays dissolved in the liquid. But, when you rapidly pour pop into a glass, or agitate it, it starts to bubble, liberating the CO_2 gas. A similar process occurs with SO_2 as fruit totes are rapidly transferred into a dump tank.

Once we understood the source of the air contaminant at the dump tank station, we made three main recommendations.

1) Enclose and ventilate the dump tank. The recommended ventilated enclosure consisted of a stainless steel exhaust hood suspended above the dump tank, with overlapped strips of clear plastic draped from the back, sides and partial front of the hood to form a soft-sided enclosure. We targeted an exhaust air flow rate of 150 cubic feet of air per square foot (150 cfm/ft2) of open face enclosure opening, a little over 5,000 cfm total. Normally, we would have recommended 100 cfm/ft2. However, this opening had to be quite tall (about seven feet) to allow the tote and fork lift truck mast access. Since the exhaust opening had to be located in the suspended hood we were worried about having sufficient air movement near the bottom of the enclosure to provide contaminant capture.
2) Rinse the fruit. To reduce employee exposure to SO_2 during further processing and sorting we recommended installation of a rack to rinse the fruit with fresh water as the fruit is conveyed up to the large processing tanks.
3) Remove the brine. We recommended pumping the dump station spent brine to disposal instead of allowing the brine to continue to off-gas SO_2 as it ran across the floor to a floor drain.

Once all of these recommendations were completed, we returned and used two digital data-logging SO_2 monitors to conduct air sampling. Our results indicated that the installed ventilation worked very well to capture the SO_2 liberated during the dumping process and greatly reduced employee exposure. Specifically we measured:

In the breathing zone of the fork lift truck operator	0 ppm SO_2
Above brine spilled on the floor out of the dump tank overflow	1.1 ppm SO_2
Above the fruit being conveyed to the processing tank after the water wash	0.5 to 1 ppm SO_2
At the open face of the enclosure	0 to 0.5 ppm SO_2
Head level five feet in any direction from the enclosure	0 ppm SO_2
Head space in a tote above the liquid level of the brine	0.5 ppm SO_2
On the cat-walk between the large processing tanks	0 ppm SO_2
On the cat-walk above the opening to the processing tank where the fruit was being delivered at the end of the dumping process	0 ppm SO_2

We did note significant spikes of SO_2 exposure for the dump tank operator as he leaned in through the side of the flexible enclosure. We suggested modifying the enclosure by installing a small window that the operator could reach through, leaving his breathing zone out of the enclosure.

Sulfer Dioxide Exposure Control at Fruit Processing Plant *(Cont'd)*

An air velocity meter was used to determine that the total exhaust flow rate from the dump station enclosure was about 5,400 cfm. We measured capture velocities ranging from 50 feet per minute (fpm) near the bottom to 225 fpm near the top of the enclosure's open face. A chemically generated smoke was used to visually observe airflow patterns and the effectiveness of contaminant capture. Even near the bottom of the enclosure's open face, capture appeared adequate.

The dump tank before installation of the ventilated enclosure with conveyor to the flume line and the large processing tanks.

The dump tank after the ventilated enclosure was added. (Note that the operator station is on the right side of the tank on a small platform. The operator (respirator hanging) is not yet in position. He was sticking his head through the plastic during the dumping of totes. That is why we recommended a window. We also recommended a window be built into the original enclosure too. You can also see the overhead stainless steel hood that the exhaust feeds into.)

Laurie Lorish, CET Grant Administrator,
Technical Services Division

MIOSHA Consultation Education and Training (CET) Grants

MIOSHA awards Consultation Education and Training (CET) annual grants for the development and implementation of a variety of safety and health training and services to supplement CET Division activities.

While the FY 2014 grants are currently underway, we have also begun to prepare for the next grant cycle. As part of this preparation, our annual CET Grant workshop was held on April 29. There were 30 attendees from 23 companies represented, which included five new attendees. This workshop provided perspective grantees with the objectives and focus of the CET grant program, as well as the Request for Proposal (RFP) submission process. The workshop covered such topics as qualifications, funding priorities, formatting, financial, and training reporting requirements.

In addition to the training, an informal "Meet and Greet" was held during our afternoon break that allowed both past and future perspective grantees the opportunity to meet one another and share ideas and best practices.

The grant applications for Fiscal Year 2015 were due on June 12, 2014 and after evaluation will be awarded in September.

Sheila Ide, MTI Facilitator
Consultation, Education and Training Division

MIOSHA Training Institute Holds Level I and Level II Safety and Health Management System Pilot Boot Camp

The MIOSHA Training Institute (MTI) held its first Level II Safety and Health Management Systems (SHMS) Boot Camp in March at Lansing Community College. Twenty students participated in an intense six-day curriculum including: "Continuous Safety & Health Improvement;" "Advanced Accident Investigation;" "Creating a Positive Safety Culture;" "Effective Safety and Health Training;" and two new piloted courses "Behavior Based Safety: Fundamentals and Implementation" and the revamped "Workplace Inspection" course. This revised curriculum will be offered starting October 1, 2014 for students who wish to obtain their Level II certificate in Safety and Health Management Systems.

Students participate in Level II Boot Camp classes.

During the first of the courses, the group connected and networking was noted as an excellent take-away from the boot camp. Based upon the feedback, facilitators decided to provide the students 15–20 minutes at the end of the Boot Camp to discuss the pros and cons of the new Boot Camp. Their suggestions were both insightful and valuable and many of their ideas will be implemented in future Boot Camps. Two Level II Safety and Health Management and two Level I General Industry Boot Camps are being scheduled for fiscal year 2015 beginning October 1, 2014.

Two MIOSHA enforcement officers were part of the Boot Camp, Heidi Lyttle and Ron Ringleka. Though there may have been apprehension at first, their fellow Boot Camp partcipants later commented that having MIOSHA enforcement officers and their insights as part of the class was another valuable take-away.

The new class "Behavior Based Safety" (BBS) was piloted by its creator, Jim Getting, CET senior consultant. The program was well-received and many helpful suggestions were made by the group to make it even more useful to the audiences. The course incorporated video clips of several Michigan company representatives describing their versions of BBS and how it works in their workplace. These descriptive videos were proof that although BBS is a universal concept, companies need to thoroughly understand their own corporate culture for safety, quality, and production to be able to customize a program that works for them. Comments were generally favorable with some very specific input and examples of how the program could be improved. The program will be updated based on the feedback and several offerings of the BBS course will be added to the MTI schedule beginning in October, 2014.

The newly combined workplace inspection program was also piloted at the March Boot Camp. Previously, students had to choose between a construction-based "Job Site Survey" and a general industry–based "Workplace Inspection" program to complete their Level II Safety and Health Management Systems certificate. As many of the management classes are a mix of students from different occupations, the combined program offers concepts that apply to both. The course is broken down into construction, general industry and health hazards and solutions. Checklists are provided as part of the training. "They (instructors) have helped empower me with some awesome tools;" "Best course yet!" are examples of the feedback received on this new course. Again the "Workplace Inspection" will be added to the 2014–2015 course schedule as one of the required courses for the Level II Safety and Health Management Systems certificate.

Several of the Boot Camp participants received their Level II certificates from MIOSHA Director Martha Yoder and Deputy Director Bart Pickelman at the Michigan Safety Conference on April 16, 2014.

Level II graduates honored at the Michigan Safety Conference.

Ron Ray, Director
Technical Services Division

Standards Update

MIOSHA staff has completed work on most of the Office of Regulatory Reinvention's Workplace Safety Advisory Rules Committee (ARC) recommendations, and only a few standards remain. Completion is anticipated by July 1, 2014. To help communicate the status of these changes, a status update page on the website at ORR standards revisions status page is maintained and regularly updated.

In addition to the above mentioned ARC work, several standards have recently been revised and became effective due to changes in the federal OSHA regulations, including:

- CS Part 6 Personal Protective Equipment
- CS Part 91 Process Safety Management of Highly Hazardous Chemicals
- CS Part 42 Hazard Communication
- GI Part 90 Hazard Communication
- OH Part 430 Hazard Communication
- GI Part 76 Spray Finishing Using Flammable and Combustible Materials

Several standards are in the process of being revised due to changes in the federal OSHA regulations, including:

- CS Part 10 Lifting and Digging Equipment
- CS Part 14 Tunnels, Shafts, Caissons and Cofferdams
- CS Part 26 Steel Erection
- GI 77 Grain Handling Facilities
- OH Part 306 Formaldehyde
- OH Part 472 Medical Services and First Aid

The revised standards can be viewed on the MIOSHA website.

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The Mission of the MIOSHA Program is:
To Protect the Safety, Health, Earned Wages and Fringe Benefits of Michigan Workers.

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

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