



Director's Corner

Martha Yoder, Director



In celebrating 40 years of keeping Michigan workers safe and healthy, MIOSHA was especially excited to host the agency's first-ever student art contest. It served as an opportunity to recognize students for their artistic talents, but more importantly, sparked

a new dialogue and got youth thinking and talking about the importance of occupational safety and health.

For most of us, good habits start early. The learned habits of our younger years tend to stick with us and are often more easily maintained later in life.

And workplace safety is no different.

Many of us have young family members and friends who will take up construction jobs or perform work around the house this summer, requiring an elevated element of safety. Our desire to keep them out of harm's way serves as an important reminder that it's never too early to instill the habit of working safe. The sooner and more frequently we practice workplace safety, the more habitual it becomes.

And that means extending the dialogue beyond the walls of the workplace and into the homes of Michigan's working men and women and the schools of their children. Safety is critical in the workplace, but important outside of it, too. Some Michigan companies understand this and go above and beyond to protect their workers. Take Albemarle Corporation of South Haven, for example. It allows and encourages employees to take personal protective equipment home to ensure their safety both on and off the clock.

Safety is a 24/7, 365-day job. Being proactive, spreading the message outside of work, and talking to youth about working safe today will help us to instill a culture of workplace safety and health tomorrow.

MIOSHA "Top 10" Most Serious Violations

Tanya Baker, MIOSHA Communications Representative

Take the steps necessary to protect your employees – avoid the most cited MIOSHA general industry safety and health violations.

General Industry Safety Violations

Oct. 1, 2012– Sept. 30, 2013

Rank	Part	Standard Rules	Description	# Serious Violations	Proposed \$ Penalty
1	85	1910.147c	Control of Hazardous Energy Sources: General requirements	285	\$433,860
2	7	727(1)	Guards for Power Transmission: Belts & pulleys	136	\$158,325
3	33	3312(1)	Personal Protective Equipment: Face & eye protection	105	\$72,400
4	39	1910.303g	Design Safety for Electrical Systems: General requirement	82	\$171,265
5	2	213(2)	Floor & Wall Openings, Stairways: Standard barrier	66	\$88,025
6	1	34(9)	General Provisions: Guard pinch point	65	\$240,900
7	1	34(3)	General Provisions: Guard point of operation	61	\$146,750
8	33	3308(1)	Personal Protective Equipment: PPE Assessment	61	\$85,590
9	26	2635(1)	Metalworking Machinery: Guard vertical band saw	52	\$47,600
10	Act 154	4080.1011a	Act 154PA of 1974: General duty clause	51	\$140,100

Continued on next page

inside this issue

- 2 Best Practices
- 6 Case Study
- 6 High Hazard Industries Series
- 7 Changes to MIOSHA Standard Part 11
- 8 FAQs: Extreme Heat
- 11 Pedestrian Fatalities — The Hazards of Vehicles in Motion in the Workplace
- 12 Awards, Partnerships and Alliances
- 13 Standards Update



Top 10 Most Serious Violations (Continued)

Tanya Baker, MIOSHA Communications Representative

These lists provide an overview of the most common hazards identified by MIOSHA during safety and health inspections. The lists can help employers identify serious hazards which could result in workplace injuries and fatalities. Employers are encouraged to use the “Top 10” lists as tools to improve safety and health at their worksites. If a standard on one of the “Top 10” lists applies to your workplace, review the specific requirements of the standard to assess the effectiveness of your safety and health system and address any deficiencies. MIOSHA standards can be downloaded from the [MIOSHA website](#). And remember, a comprehensive safety and health management system is the best framework to help employers comply with MIOSHA standards.

General Industry Health Violations

Oct. 1, 2012– Sept. 30, 2013

Rank	Part	Standard Rules	Description	# Serious Violations	Proposed \$ Penalty
1	472	7201(3)	Medical Services & 1st Aid: Eye & Body Wash Station	75	\$86,900
2	430	1910.1200e	Hazard Communication: Written hazard communication program	64	\$53,475
3	433	Rule 8	Personal Protective Equipment: Face & eye protection	47	\$29,825
4	433	Rule 5	Personal Protective Equipment: PPE Assessment	43	\$30,525
5	451	1910.134c	Respiratory Protection: Written Program	32	\$23,965
6	490	1910.146c	Confined Space Entry: General requirements	31	\$26,375
7	433	Rule 6	Personal Protective Equipment: Training	31	\$29,000
8	430	1910.1200h	Hazard Communication: Employees not provided information or training	30	\$89,100
9	305	1910.1001j	Asbestos: Communication of hazards to employees Introduction.	28	\$17,275
10	554	Rule 4	Bloodborne Infectious Diseases: Exposure control plan	20	\$15,700

Key Elements of a Safety and Health Management System:

- Management Commitment
- Employee Involvement
- Workplace Analysis
- Hazard Prevention and Control
- Safety and Health Training

Best Practices: Dow Corning, Auburn Site

Doug Kimmel, Michigan Voluntary Protection Program (MVPP) Specialist, Consultation, Education and Training (CET) Division

The Dow Corning, Auburn Site has been part of the Michigan Voluntary Protection Program (MVPP) since 2008. The MVPP Star award is given to sites that have an exemplary safety and health management system with injury and illness incidence rates below the industry average for the last three years.

The Auburn site produces advanced silicone and silicon related products for hi-tech industries such as aerospace, electronics and automotive. If you use a computer, cell phone, or drive a car – you’ve probably used one of its products.



Continued on next page

Best Practices (Continued)

Doug Kimmel, MVPP Specialist, CET Division



The Auburn site vision is “With uncompromising values, our engaged employees develop and manufacture high performance materials. Our flexibility and commitment to quality yield high value products, positioning our customers for success and delivering profitable growth to Dow Corning.”

The values that support the vision statement are sustainability, employees, technology, quality, safety, integrity, and customers. Its vision and values are what guide its path and align it with the entire Dow Corning Enterprise. Safety is a core value for Dow Corning and the site. The Auburn site reports that it has benefitted from participation in the

MVPP through the relationship with MIOSHA, networking with other MVPP sites, and mentoring other companies.

The identification of best practices is an integral part of the MVPP approval and continuous improvement process.

Some of Dow Corning Auburn’s best practices include:

Change Management

To make engineering, chemical, or procedural changes, the Auburn site uses a change management system known as Process Change Request, or PCR. The PCR requires all employees to follow a defined process for making any changes that are not “like for like” and controls any changes made on site without proper review and approval. The management team meets weekly to review PCR applications, during which a minimum number of management representatives must be present to ensure differing disciplines (environmental, safety, engineering, quality, and site leadership) are accounted for.

The four different categories of PCRs are:

- **Standard PCR** – Follows a normalized procedure consisting of a PCR team review in person (site management) and standardized risk assessment documentation.
- **Low Risk PCR** – Requires the proper paperwork/electronic form to be completed, but allows the local team to perform the review and approve at the local level.
- **Temporary PCR** – Allows for the trial of something new or that is only needed temporarily. There is an expiration date when the change is discontinued without further approval and documentation.
- **Emergency PCR** – Required when a process is shut down or needs an engineering change or critical attention. An emergency PCR still requires the standard steps, but allows e-mail, phone, or in-person approval. Emergency PCRs are rarely used.



The four different PCR methods above mitigate events that arise. A PCR applicant that wants to make a change applies via a computer-based tool, which then tracks the requested change from start to finish.

The PCR requires an in depth risk assessment of each proposed change. The various disciplines involved in the review must also “sign-off” prior to the start of any PCR.

Below is an example of the general steps for a standard PCR:

- Origination
- Engineering Approval
- Initial Approval
- Closure
- Handover Approval
- PCR Committee
- Start-up Approval
- Expert Approval (EHSS, IH, Toxicity)
- Documentation Approval
- Final Design Approval

Continued on next page

Best Practices (Continued)

Doug Kimmel, MVPP Specialist, CET Division

Management commitment to the PCR process is extremely strong. Without this level of commitment, it would not be possible to manage all of the change requests received from the teams, functions, and personnel at the site. Management at the Auburn site is certain that without the control of change, they would have safety and quality issues, and potential injuries. They have seen firsthand how the PCR system has prevented the installation of unsafe machinery/equipment and the unprepared operation of equipment and/or procedures. Control of change is fundamental to the site's safety culture. From management, to engineers, to the maintenance shops – everyone knows that a PCR is required in order to make a change.

Safe Work Permits

Safe Work Permits (SWPs) are utilized at the Dow Corning Auburn site to maintain employee safety and ensure that hazards are safeguarded. The SWP policy was created in 2012, after corporate safety officers reviewed all Dow Corning sites and determined that all SWP processes implemented at its “small” sites should be standardized. After deliberation and input from multiple teams, a standardized SWP for small sites was drafted. The multi-site policy has increased uniformity in safety procedures, streamlined plant-to-plant safety, increased audit effectiveness, and allowed safety advancements to be easily shared between Dow Corning sites.

A “standard” SWP is a specialized document that initiates and documents the communication of tasks between workers and the equipment operator. It also provides for communication about the hazards involved in the task (s) and ensures that proper safe guards are in place and understood. Tasks can be as simple as painting a wall or as complicated as installing a new piece of equipment.

Whenever tasks are especially hazardous, such as work involving heat, heights, excavation, electricity, pipelines or vessels, or any other “high risk” work, additional specialty permits are required.

Below are samples of the permits used at Dow Corning Auburn:

1. **Confined Space Permit (CSP)** – Required when a space contains/has the potential to contain a hazardous atmosphere; contains a material with potential to engulf someone who enters the space; has an internal configuration that might cause an entrant to be trapped or asphyxiated; and/or contains any other recognized serious safety or health hazard.
2. **Hot Work Permit** – Used for anything that can be an ignition source (i.e., welding, grinding, cutting, drilling).
3. **Excavation Permit** – Required for excavations greater than six inches.
4. **Pipeline Opening Permit** – Required for any pipe opening.
5. **Energized Electrical Work (EEW)** – Used only when the hazards are greater than not de-energizing.
6. **Work at Height Permit (WAH)** – Required when work is performed at 6’ or above, 6’ from a leading edge, etc.
7. **Crane Permit** – Required when lifts are made with a crane.
8. **Critical Lift Permit** – Typically required when two cranes are involved in a lift.
9. **Lock Out Permit** – Required for isolation of hazardous energy that is not addressed in a standard operation procedure.



Continued on next page

Best Practices (Continued)

Doug Kimmel, MVPP Specialist, CET Division

Monthly, a total of approximately 160 standard and specialty SWPs are written. All standard SWPs are signed off by both the employee performing the action, and his or her supervisor. The supervisor's signature can only come after the employee performing the work is made aware of the safety standards and possible hazards of the task at hand – communication!

Most specialty permits must be signed off by an Environmental, Health, Safety, and Security (EHSS) Officer, as well as the employee and his or her supervisor. EEW specialty permits are the exception, requiring a higher level of sign-off. In addition to the three previously required signatures (employee, his or her supervisor, an EHSS Officer), an electrical engineer or licensed electrician must also sign-off. The electrical engineer or electrician signing the permit must be familiar with the electrical system in question, determine if the permit was properly filled out, and ensure the employee performing the work is aware of possible hazards.

Dow Corning Auburn utilizes an active management monitoring style system for the review of completed permits. Through this system, management observes employees performing work duties, determines if the work practices comply with Dow Corning safe work standards, evaluate the SWPs and ensures employees' work, personal protective equipment, and safeguards are in line with requirements. All completed SWPs are retained and may be used for future review, such as in the case of an accident or incident investigation.

The standardized SWP system has reduced variability between plants, saved resources by maintaining only one system, and allowed safety standards to be more easily communicated to employees.

“

After spending most of the last decade working outside of the U.S., I am very grateful for the safety focus that the MVPP sites, MIOSHA, and the industry puts on safety here in Michigan. I remember a time after giving a safety review of our safety management system to foreign Chemical CEOs, there was always one statement raised: 'We just can't afford that.' I always responded back the same way: 'Safety is a culture.' It does not take significant money to have good safety procedures, to set expectations for good safety procedures, or to believe in following safety procedures. Safety starts with management and works its way throughout an organization – it's a culture. We take safety seriously at the Dow Corning Auburn site and want everyone that comes to work to go home in the same condition in which they arrived. Without the commitment to safety from our most important asset, the people here, we wouldn't be successful. Safety is a core value for us here and it shows in our employees whether it is the site manager or the shop floor. We care about safety. ”

- David Roberson, Auburn Dow Corning

MIOSHA Has Moved!

MIOSHA has moved to the Stevens T. Mason Building in downtown Lansing. Click [here](#) for directions to our new location and [here](#) for a list of new phone and fax numbers.

Injury Case Study: Metal Stamping Die Helper

Michael Brodzik, Senior Safety Officer, General Industry Safety and Health Division (GISHD)



On January 29, 2015, a die helper was assisting a crane operator with the movement of a large metal stamping die using an overhead crane in an aisle way. During the transportation of the die to the target press, the die helper stepped backwards into a nearby press pit. The employee fell into the pit onto materials that were stored inside and suffered fractures to the ribs and collar bone. The press pit was identified as a permit-required confined space. It had been left open for approximately seven hours after stored materials had been removed from it during the previous shift. The press pit was approximately 16 feet deep. It had been opened as directed by management, entered by an employee, and then left open when shift work in the pit was completed. The entry and opening procedures did not comply with the requirements of Part 90, Permit-Required Confined Spaces.

The company was cited for the following MIOSHA violations:

- **Part 2, Floor and Wall Openings, Stairways and Skylights, Rule 215(5):** There was an inadequate temporary barrier used for the opening to a press pit.
- **Part 90, Permit-Required Confined Spaces:**
 - **Rule (c)(2)** – Signs were not posted or had worn away at entry point into press pits.
 - **Rule (d)(3)** – Untrained employees had made multiple entries into permit spaces without following the requirements for safe permit space entry.
 - **Rule (d)(4)** – No retrieval system or air monitoring equipment was used and an existing four-gas meter was not operational.
 - **Rule (g)(1)** – No training was provided to employees that were making entries into press pits identified as permit spaces.
 - **Rule (k)(1)** – Coordination and arrangements had not been made with identified prospective rescue and emergency services.

Series on the 10 High-Hazard Industries in Michigan

Machinery Manufacturing

Rick Pfander Jr., Safety Supervisor, General Industry Safety and Health Division (GISHD)

Machinery Manufacturing (NAICS 333) is one of the 10 high-hazard industries targeted by MIOSHA for enforcement and outreach activities during 2014-2018 because of high injury and illness rates in the industry. The incidence rate of nonfatal occupational injuries and illnesses in machinery manufacturing in Michigan in 2013 was 5.4 cases per 100 full-time workers, compared to 4.8 cases for all private employers.

Industries in the machinery manufacturing subsector create end products that apply mechanical force, like the application of gears and levers, to perform work. Some important processes for the manufacturing of machinery are forging, stamping, bending, forming, and machining that is used to shape individual pieces of metal. Processes such as welding and assembling are used to join separate parts together. Although these processes are similar to those used in metal fabricating establishments, machinery manufacturing is different because it typically employs multiple metal forming processes in manufacturing the various parts of the machine. Moreover, complex assembly operations are an inherent part of the production process.

Continued on next page

Machinery Manufacturing (Continued)

Rick Pfander Jr., Safety Supervisor, General Industry Safety and Health Division

Safety and Health Hazards

Individuals employed in machinery manufacturing occupations are exposed to serious safety and health hazards on a daily basis, including ergonomic ones. The safety hazards encompass falls from elevated surfaces; crushing in between point of operation components on material forming equipment; crushing injuries with material storage and scrap metal handling; lacerations, entanglements, crushing, and impaling hazards from moving machinery; burns when working with hot metal in various stages of the manufacturing process; and slips, trips and falls from bad housekeeping practices. The equipment and materials used in this industry can expose employees to falling objects, flying particles, pinch points, and electrical hazards.



Workers are also exposed to serious health hazards from exposure to chemicals, noise and heat. Chemical exposures found in these facilities are from air contaminants such as carbon monoxide, metal working fluids, hexavalent chromium, metal dusts/fumes and various solvents. These hazards can affect workers' overall well-being; some are known to cause cancer and can also target specific organs such as the lungs, skin, liver and kidneys. Exposure to high noise levels can lead to hearing loss. Overexposures to heat stress can produce rashes, fainting and even death.

MIOSHA Standards

Many MIOSHA standards apply to this industry. The applicable General Industry Safety Standards include Parts 1, 1A, 2, 7, 11, 12, 14, 18, 19, 20, 21, 23, 24, 26, 27, 33, 38, 39, 40, 42, 44, 45, 49, 58, 62, 75, 76, 85, 92 and Act 154. The Occupational Health Standards include Parts 301, 315, 380, 430, 433, 451, 470, 472, and 474. These standards, and publications related to the hazards, are located on the MIOSHA website at <http://www.michigan.gov/MIOSHA>.

MIOSHA's Consultation, Education and Training (CET) Division is available to employers so they can take steps voluntarily to correct hazards and comply with current safety and health regulations and practices. Employers can contact CET at 517-284-7720 for a free evaluation of their work place.

Changes to MIOSHA Standard Part 11, Recording and Reporting of Occupational Injuries and Illnesses

Beginning September 1, 2015, MIOSHA will implement the new injury reporting requirements in response to the changes federal OSHA made effective January 1, 2015. Employers in the state of Michigan will be required to report any work-related amputation, loss of an eye, or in-patient hospitalization of any employee, within 24 hours of the incident. Currently, employers must report the work-related in-patient hospitalization of three or more employees.

Beginning this September, employers can go to the [MIOSHA Recordkeeping website](#) to report an in-patient hospitalization, amputation, or loss of an eye incident or call the new injury report line. This system should NOT be used for reporting work related fatalities. All work-related fatalities must still be reported within eight hours to the current fatality line: **1-800-858-0397**.

The previous reporting requirement classified as a catastrophe (in-patient hospitalization of three or more employees) is in the process of being removed from the Michigan Occupational Safety and Health Act (Act 154, of 1974). If the changes to Act 154 are not in effect by September 1, 2015, violations for not reporting in-patient hospitalizations of less than three employees will not be issued. Employers not reporting amputations or loss of eye injuries to MIOSHA within 24 hours would be in violation of the Part 11 standard. Updates will be provided on the status of Act 154 changes as information is made available. If you have any questions, please contact MIOSHA Information Services Section staff at (517) 284-7788.

FAQs: Extreme Heat



**WATER.
REST.
SHADE.**

Q: What happens to the body as a result of exposure to extreme heat?

People suffer heat-related illness when the body's temperature control system is overloaded. The body normally cools itself by sweating, but under some conditions, sweating just isn't enough. In such cases, a person's body temperature rises rapidly. Very high body temperatures may damage the brain or other vital organs. Several factors affect the body's ability to cool itself during extremely hot

weather. When humidity is high, sweat will not evaporate as quickly, preventing the body from releasing heat quickly. Other conditions that can limit the ability to regulate temperature include age, obesity, fever, dehydration, heart disease, mental illness, poor circulation, sunburn, prescription drug use, and alcohol use.

Q: Who is at greatest risk for heat-related illness?

Infants and children up to four years of age, people 65 years of age and older, people who are overweight, and people who are ill or on certain medications are most at risk.

Q: What should I do if I work in a hot environment?

Pace yourself. If you are not accustomed to working or exercising in a hot environment, start slowly and pick up the pace gradually. If exertion in the heat makes your heart pound or leaves you gasping for breath, STOP all activity. Get into a cool or shaded area and rest, especially if you become lightheaded, confused, weak, or faint. Instruct everyone who is to be heat exposed and those responsible for the activities how to prevent heat-related illness, how to recognize the early warning signs and symptoms of heat stress, and inform them how to reduce discomfort and danger in the early stages of heat exposure.

Q: What is heat stroke?

Heat stroke is the most serious heat-related illness. It occurs when the body becomes unable to control its temperature; the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. Body temperature may rise to 106°F or higher within 10-15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not provided.

Q: What are the warning signs of a heat stroke?

Warning signs of heat stroke vary, but may include the following:

- An extremely high body temperature (above 103°F)
- Red, hot, and dry skin (no sweating)
- Rapid, strong pulse
- Throbbing headache
- Dizziness
- Nausea
- Confusion
- Unconsciousness

Heat Stroke



Red, hot, dry skin



High temperature



Confusion



Fainting



Convulsions

Q: What should I do if I see someone with any of the warning signs of heat stroke?

If you see any of these signs, you may be dealing with a life-threatening emergency. Have someone call for immediate medical assistance while you begin cooling the victim.

- Get the victim to a shady area.
- Cool the victim rapidly, using whatever methods you can. For example, immerse the victim in a tub of cool water; place the person in a cool shower; spray the victim with cool water from a garden hose; sponge the person with cool water; or if the humidity is low, wrap the victim in a cool, wet sheet and fan him or her vigorously.
- Monitor body temperature and continue cooling efforts until the body temperature drops to 101-102°F.
- If emergency medical personnel are delayed, call the hospital emergency room for further instructions.
- Do not give the victim alcohol to drink.
- Get medical assistance as soon as possible.

Continued on next page

FAQs: Extreme Heat (Continued)

Q: What is heat exhaustion?

Heat exhaustion is a milder form of heat-related illness that can develop after several days of exposure to high temperatures and inadequate or unbalanced replacement of fluids. Those most prone to heat exhaustion are elderly people, those with high blood pressure, and those working or exercising in a hot environment.

Q: What are the warning signs of heat exhaustion?

The warning signs of heat exhaustion include the following:

- Heavy sweating
- Paleness
- Muscle cramps
- Tiredness
- Weakness
- Dizziness
- Headache
- Nausea or vomiting
- Fainting

The skin may be cool and moist. The pulse rate will be fast and weak, and breathing will be fast and shallow. If heat exhaustion is untreated, it may progress to heat stroke. Seek medical attention if symptoms worsen or last longer than one hour.

Q: What steps can be taken to cool the body during heat exhaustion?

- Drink cool, nonalcoholic beverages
- Rest
- Take a cool shower, bath, or sponge bath
- Seek an air-conditioned environment
- Wear lightweight clothing

Q: What are heat cramps and who is affected?

Heat cramps are muscle pains or spasms – usually in the abdomen, arms, or legs – that may occur in association with strenuous activity. People who sweat a lot during strenuous activity are prone to heat cramps. This sweating depletes the body's salt and moisture. The low salt level in the muscles causes painful cramps. Heat cramps may also be a symptom of heat exhaustion. If you have heart problems or are on a low-sodium diet, seek medical attention for heat cramps.

Q: What should I do if I have heat cramps?

If medical attention is not necessary, take the following steps:

- Stop all activity and sit quietly in a cool place.
- Drink clear juice or a sports beverage.
- Do not return to strenuous activity for a few hours after the cramps subside because further exertion may lead to heat exhaustion or heat stroke.
- Seek medical attention for heat cramps if they do not subside in one hour.

Q: What is heat rash?

Heat rash is a skin irritation caused by excessive sweating during hot, humid weather. It can occur at any age but is most common in young children. Heat rash looks like a red cluster of pimples or small blisters. It is more likely to occur on the neck and upper chest, in the groin, under the breasts, and in elbow creases.

Q: What is the best treatment for heat rash?

The best treatment for heat rash is to provide a cooler, less humid environment. Keep the affected area dry. Dusting powder may be used to increase comfort.

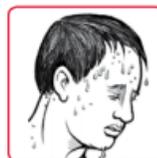
Heat Exhaustion



Dizziness



Headache



Sweaty skin



Fast heart beat



Nausea, vomiting



Weakness



Cramps

FAQs: Extreme Heat (Continued)

Q: Can medications increase the risk of heat-related illness?

The risk for heat-related illness and death may increase among people using the following drugs: (1) psychotropics, which affect psychic function, behavior, or experience (e.g. haloperidol or chlorpromazine); (2) medications for Parkinson's disease, because they can inhibit perspiration; (3) tranquilizers such as phenothiazines, butyrophenones, and thiozanthenes; and (4) diuretic medications or "water pills" that affect fluid balance in the body.

Q: How effective are electric fans in preventing heat-related illness?

Electric fans may provide comfort, but when the temperature is in the high 90s, fans will not prevent heat-related illness. Taking a cool shower or bath or moving to an air-conditioned place is a much better way to cool off. Air conditioning is the strongest protective factor against heat-related illness. Exposure to air conditioning for even a few hours a day will reduce the risk for heat-related illness. Consider visiting a shopping mall or public library for a few hours.

Q: How can people protect their health when temperatures are extremely high?

Remember to keep cool and use common sense. Drink plenty of fluid, replace salts and minerals, wear appropriate clothing and sunscreen, pace yourself, stay cool indoors, schedule outdoor activities carefully, use a buddy system, monitor those at risk, and adjust to the environment.

Q: How much should I drink during hot weather?

During hot weather, you will need to drink more liquid than your thirst indicates. Increase your fluid intake, regardless of your activity level. During heavy exercise in a hot environment, drink two to four glasses (16-32 ounces) of cool fluids each hour. Avoid drinks containing alcohol because they will actually cause you to lose more fluid.

Q: Should I take salt tablets during hot weather?

Do not take salt tablets unless directed by your doctor. Heavy sweating removes salt and minerals from the body. These are necessary for your body and must be replaced. The easiest and safest way to do this is through your diet. Drink fruit juice or a sports beverage when you exercise or work in the heat.

Q: What is the best clothing for hot weather or a heat wave?

Wear as little clothing as possible when you are at home. Choose lightweight, light-colored, loose-fitting clothing. In the hot sun, a wide-brimmed hat will provide shade and keep the head cool. If you must go outdoors, be sure to apply sunscreen 30 minutes prior to going out and continue to reapply according to the package directions. Sunburn affects your body's ability to cool itself and causes a loss of body fluids. It also causes pain and damages the skin.



Pedestrian Fatalities—The Hazards of Vehicles in Motion in the Workplace

Don Trefry, Safety Supervisor, General Industry Safety and Health Division (GISHD)

We are all aware of the dangers facing road construction workers and other emergency personnel along our roads and freeways, but have you considered parking lots, freight loading docks, agricultural fields, and other unimproved areas where foot and vehicle traffic mix? When assessing your workplace for hazards, take a look at what goes on outside the plant. Do employees cross traffic lanes designated for delivery trucks or other vehicles such as forklifts when arriving for or leaving work? Do employees take shortcuts or walk for exercise on lunch breaks through areas with vehicle traffic?

Pedestrians often put themselves at risk by not being fully aware of the potential hazards around them, even when just passing through an area. Weather-related conditions, obstacles, vehicle blind spots, or lack of traffic and pedestrian control measures, all contribute to accidents.

The General Industry Safety and Health Division (GISHD) investigated the following vehicle-pedestrian accidents, which resulted in fatal injuries:

- A local delivery truck driver was walking to his truck across the area in front of the loading docks when he was struck from behind by another driver.
- A school bus driver was walking across the parking area to her bus, when she was struck by another bus.
- An employee was walking in the yard of the facility when struck by a forklift truck that was carrying a load, which blocked the view of the operator.
- A farm worker was behind a large pile of silage, cutting strings on a bale of hay. The driver of a pay loader came around the corner of the silage pile and struck the employee.
- A truck driver had pulled away from the loading dock and stopped to close the trailer doors. A second driver sitting parallel to the dock had observed the truck pull away. That driver began to turn and then back into the dock. The first driver was crushed between the rear of his trailer and the side of the moving trailer.
- A trucking freight terminal worker was walking to his personal vehicle to retrieve needed equipment, and walked across marked and active traffic lanes. A truck driver leaving the warehouse turned onto the marked lanes and struck the worker.
- A truck driver was waiting in a field with other trucks for a load of sugar beets as they were being harvested. He was found lying in the field after being struck by a vehicle.



In each of these cases, the driver claimed to have not seen the victim. There were no traffic or pedestrian control measures to separate pedestrians from the vehicles, or provide a controlled crossing access. Certainly, there are not going to be signs or painted crosswalks in an agricultural field, but other means to ensure the safety of workers can be taken.

General industry safety standards do not specifically address this issue outside a plant or shop. However, the MIOASH Act 154 of 1974, as amended, Section 11(a) which is often referred to as the [General Duty Clause](#), requires an employer to: “Furnish to each employee, employment and a place of employment that is free from recognized hazards that are causing, or are likely to cause, death or serious physical harm to the employee.” Whenever there is a serious hazard to which employees are exposed, the hazard is not covered by a specific MIOASHA regulation, the employer has knowledge of the hazard, and there is a method of eliminating the hazard, the General Duty Clause would be applicable.

Awards, Partnerships and Alliances

MIOSHA Awards Astech, Inc. in Vassar for Elevated Worker Safety and Health

The jobbing foundry and shot blast preplacement manufacturer, Astech, Inc. received the prestigious Michigan Safety and Health Achievement Recognition Program (MSHARP) award in May 2015 for an exceptional safety and health management system.

Bay City Metals Awarded MIOSHA Certification for Exemplary Workplace Safety for Second Time

Fabricated metal manufacturer, Metal Sales Manufacturing Corporation in Bay City received renewal of its MSHARP certification award in May 2015. Some of Metal Sales' new improvements include internal auditing of its safety program and the creation of statistical reports that compare severity and frequency of rates against prior records.

AlcoTec in Traverse City Receives Renewed MIOSHA Certification for Outstanding Workplace Safety and Health

AlcoTec Wire Corporation in Traverse City, a manufacturer of welding wire, was awarded renewal of its MSHARP certification in May 2015.

Wolverine Building Group and MIOSHA Partner to Protect Workers During Construction of Student Housing in Allendale

The Wolverine Building Group and MIOSHA signed a formal partnership in May 2015 with the goal of enhanced safety and health, and zero worker injuries during the construction of a new student housing apartment complex in Allendale.

MIOSHA and CMMA Sign Alliance to Foster Safer, More Healthful Workplaces

MIOSHA and Central Michigan Manufacturers Association, Safety Special Interest Group established a cooperative relationship in May 2015 to provide CMMA/SIG members and others with information, guidance, and access to training to reduce and prevent exposure to workplace hazards.

Huntsman Polyurethanes' Auburn Hill Site Receives Fourth Consecutive "Star" Status Award from MIOSHA

MIOSHA awarded Huntsman in Auburn Hills continued status as a "Star" participant in the Michigan Voluntary Protection Program, keeping the status the site has maintained since 2004.

MIOSHA, Green Industry Association Form Alliance to Protect Workers

The Michigan Green Industry Association and MIOSHA formed an alliance in July 2015 to provide MGIA members and others with information, guidance, and access to training to reduce and prevent exposure to workplace hazards.



Standards Update

Revisions to General Industry Part 73 Fire Brigades became effective May 28, 2015, marking the close of a more than three-year project to comply with the Office of Regulatory Reinvention's Workplace Safety Advisory Committee report from January 2012. The [ORR standards status webpage](#) dedicated to this work will remain active in order to clarify what changes occurred since 2012.

MIOSHA Standards Recently Revised

- CS Part 10 Cranes and Derricks
- CS Part 11 Fixed and Portable Ladders
- CS Part 16 Power Transmission and Distribution
- GI Part 33 Personal Protective Equipment
- GI Part 39 Design Safety Standards for Electrical Systems
- GI Part 45 Die Casting
- GI Part 86 Electric Power Generation, Transmission and Distribution
- OH 306 Formaldehyde
- OH Part 509 Illumination for Pulpwood Logging
- OH Part 510 Illumination for Sawmills
- ADM Part 11 Recording and Reporting of Occupational Injuries and Illnesses

Final versions of these revised standards can be viewed on our [standards webpage](#).

MIOSHA Standards Being Revised

- CS Part 1 General Rules
- CS Part 7 Welding and Cutting
- CS Part 9 Excavation, Trenching and Shoring
- CS Part 10 Cranes and Derricks
- CS Part 12 Scaffold and Scaffold Platforms
- CS Part 15 Excavators, Hoists, Elevators, Helicopters and Conveyors
- CS Part 16 Power Transmission and Distribution
- CS Part 25 Concrete Construction
- CS Part 35 Confined Space in Construction
- GI Part 7 Guards for Power Transmission
- GI Part 21 Powered Industrial Trucks
- GI Part 74 Fire Fighting
- GI Part 85 The Control of Hazardous Energy Sources
- OH Part 380 Occupational Noise Exposure in General Industry
- OH Part 520 Ventilation Control
- OH Part 523 Abrasive Blasting
- OH Part 526 Dipping and Coating Operations
- OH Part 529 Welding, Cutting and Brazing
- Administrative Part 4 Procedures of the Board of Compliance and Appeals
- Administrative Part 13 Inspections and Investigations, Citations, and Proposed Penalties

Watch the MIOSHA [standards webpage](#) for final versions once they are approved. For more information regarding these proposed changes, go to the [ORR proposed rule status page](#) and click on "proposed revision info" adjacent to the specific standard.



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; we encourage reprinting.

Director:

Martha B. Yoder

Deputy Director:

Barton G. Pickelman

Editor:

Tanya Baker

MIOSHA Hotline:

800-866-4674

Fatality Hotline:

800-858-0397

General Information:

517-284-7777

Michigan Department of Licensing and Regulatory Affairs (LARA)

Michigan Occupational Safety and Health Administration (MIOSHA)

www.michigan.gov/miosha



LARA is an equal opportunity employer/program.

Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.