Michigan Safety Conference

Construction Safety and Health Division Update April 16, 2024 Dan W. Maki, Health and Safety Manager Nikki Clark, MS, Health and Safety Manager



Michigan Occupational Safety and Health Administration (MIOSHA)

Disclaimer

Information provided in this presentation may contain legal information. Legal information is not the same as legal advice – the application of law to an individual's specific circumstances.

The agency will do its best to provide you with information that is accurate and useful, but it is recommended you consult a lawyer if you want professional assurance the information, and your interpretation of it, is appropriate to your particular situation.



MIOSHA Mission

Help Protect the Health and Safety of Michigan Workers!

A BIG THANK YOU For Being Our Partner!!!



MIOSHA Mission

Help Protect the Health and Safety of Michigan Workers! **Construction Safety and Health Division Mission Statement:** Prevent death, injury, and disease through eliminating or reducing construction worker exposure to safety hazards, physical hazards, and chemical hazards.

The division is committed to these goals by conducting inspections to enforce MIOSHA safety and health regulations that apply to the construction industry, administering and enforcing the Asbestos Contractors Licensing Act, the Asbestos Workers Accreditation Act, and by providing safety and health guidance to the construction industry.

MIOSHA Mission:

Help Protect the Health and Safety of Michigan Workers!

Update Overview:



- CSHD Staffing Update
- CSHD Fatal stats from 2023
- CSHD Top 10 Serious Safety Standards and Health Standards Cited 2023
- Number of Residential and Non-residential Inspections conducted 2023
- PRAs and 1st Appeals
- House Bill 4185 signed into law (for asbestos)
- Part 26, Steel Erection Update
- Part 9, Excavation and Trenching Update
- MIOSHA Trenching and Excavation National Emphasis Program (NEP)
- Heat Stress
- Silica Safety

MIOSHA Mission:

Help Protect the Health and Safety of Michigan Workers!

*In the process of hiring 4 new Safety Officers and 1 IH

Staffing Update, Lots of New Safety Staff!

MIOSHA - CSHD (SAFETY)



Revised 04/18/2024

MIOSHA Mission:

Help Protect the Health and Safety of Michigan Workers!

Staffing Update, Health Staff!





MIOSHA CSHD Fatality Information 2023

8 Total Fatalities

- 4 Struck By/Against
- 3 Falls
- 1 Electrocution
- 0 Crushed
- 0 COVID
- 0 Caught-in/between
- 0 Cave-in
- 0 Homicides
- 0 Burn
- 0 Inhalation

Top 10 CSHD Safety Standards Cited FY2023

*Results do not include OTS

Standard	Times Cited	Penalties
Construction Part 45, Fall Protection	283	\$374,500
Construction Part 6, PPE	136	\$107,600
Construction Part 12, Scaffolds	103	\$121,000
Construction Part 17, Electrical Installations	69	\$62,720
Construction Part 11, Fixed and Portable Ladders	68	\$39,000
Construction Part 19, Tools	64	\$46,400
Construction Part 32, Aerial Work Platforms	47	\$50,800
Construction Part 21, Guarding Walking/Working Surfaces	43	\$33,000
Construction Part 9, Excavations and Trenching	38	\$60,700
Construction Part 1, General Rules	38	\$41,000

Top 10 CSHD Health Standards Cited FY2023

*Results do not include OTS

Standard	Times Cited	Penalties
Construction Part 602, Asbestos Standards for Construction	192	\$80,700
Construction Part 690, Silica	59	\$62,800
Construction Part 305, Asbestos in General Industry	24	\$10,840
Construction Part 603, Lead Exposure in Construction	21	\$15,600
Act 135, Abatement Licensing Act	18	\$19,600
Administrative Part 11, Recording and Reporting of Occupational Injuries/Illnesses	6	\$2,300
Act 440, Asbestos Accreditation Act	4	\$2,000
Part 42, Hazard Communication	3	\$2,400
OH Part 451 Respiratory Protection	3	\$1,200
Construction Part 6, PPE	2	\$400

Number of Residential

VS

Non-Residential Inspections

Conducted by CSHD in 2023

Number of Inspection Conducted by CSHD in FY 2023

Residential or NonResidential	Number of vioalations	Sum Of Initial Penalty	Sum Of Current Penalty		
NonRes	2171	\$1,040,360	\$791,480		
Res	1026	\$410,270	\$344,855		

3197 Total Citations Issued by CSHD in FY 2023 (Safety and Health) \$1,136,335 in Penalties Issued

PRAs

*Filed instead of a 1st Appeal

*MUST APPLY within 5-10 working days of receipt of citations

*Grants a 50% discount on citations

*All correspondence is via email

*Add <u>MIOSHA-</u> <u>PRA@mihealth.org</u> to your address book

Penalty Reduction Agreements (PRAs) FY 2023

After citation issuance:

- Employers may apply for a PRA (unless it's a fatality, willful, Severe Violator Enforcement Program (SVEP), or Failure to Abate).
- A Penalty Reduction Agreement allows you or your representative(s) to reach a tentative agreement to resolve penalties concerning a MIOSHA Investigation of your establishment.
- It is NOT an agreement to change the number of citations issued, the rule cited, the description of violation, the classification, or abatement date.
- It does not extend the 15-working day appeal period. Abatement is required.
- 223 PRAs were Approved by CSHD in FY 2023.

1st Appeals settled by CSHD in FY2023

*MUST BE FILED BY MAIL

*MUST BE FILED within 15 working days of receipt of citations (does not include holidays or weekends)

*Handled by phone.

*Where a settlement can't be reached, the employer does have further due process rights (i.e., 2nd Appeal or Formal Appeal).

Number of 1st Appeals Settled FY 2023

After citation issuance:

- Employers may appeal (by mail ONLY) within 15 working days of receipt of the citation packet (sent by Certified Mail).
- 179 appeals filed total FY 2023.
 - 65 cases settled during the 1st appeal (36%) settled during 1st appeal.

PA 154 amended with new law PA 17 of 2024

House Bill 4185 Enacted Into Law as

PA 17 of 2024 (Asbestos Related amendment)

- On March 12,2024, HB 4185 was signed into law by Governor Whitmer, becoming PA 17 of 2024.
- This law amended PA 154 of 1974.
- This law provided a definition for "asbestos" and "asbestos related violation".
- States repeat violations are violations which are repeated in any 5-year period (this) changes the current 3-year policy. ONLY FOR ASBESTOS.
- The board shall not reduce the civil penalty by more than a total of 95% or by more than the corresponding percentage for each of the following:

a) In considering the size of the business, 70%.
(b) In considering the good-faith efforts of the employer, 25%.
(c) In considering the history of previous citations, 10%.

Construction Standard Part 26, Steel Erection Updated!

It's Dangerous Work!

MIOSHA amended Construction Safety Part 26, Steel Erection, to adopt by reference Subpart R, except for 1926.753 "Hoisting and Rigging" and 1926.761 "Training," which are currently covered under Michigan rules which we adopt by reference in R 408.42601



 Part 26 Updated, effective January 3, 2024 **Construction Standard Part 9, Excavation, Trenching and Shoring Updated!**

It's Dangerous Work!

- Excavation and trenching continue to be some of the most dangerous construction activities.
- In the past 2 decades in Michigan, there have been 31 excavation fatalities.
- For each fatal incident, there are dozens of excavation accidents resulting in serious injuries.
- There were 130 excavation fatalities in the US from 2011 to 2016.

Source: Census of Fatal Occupational Injuries (CFOI), published by Bureau of Labor Statistics (BLS) data. Michigan Department of Labor & Economic Opportunity



- related injuries and fatalities can be prevented!
- Trench cave-ins can trap, crush and suffocate workers.

PREVENT CAVE-INS SLOPE IT. SHORE IT. SHIELD IT.

SLOPE or bench trench walls SHORE trench walls with supports SHIELD trench walls with trench boxes

For FREE assistance in providing a safe and healthy workplace, visit Michigan.gov/CET or call us at 517-284-7720.



It's Dangerous Work!

- 1 Cubic yard of soil can weigh >1 Ton
 - Cave-ins are the most common hazard
- And there are Other Hazards:
 - Nearby structures (buildings, trees, boulders, and sidewalks can be a hazard when they are undermined).
 - Utilities lines in trenches can carry water, sewage, natural gas or electricity, and if damaged, workers can be burned, drowned, electrocuted, asphyxiated



 Proper hazard assessment and planning can ensure safe work practices!

MIOSHA's Trenching and Excavation National Emphasis Program (NEP) – Issued 2-12-19, 5 yr. renewal cycle

An "Agency Instruction" that describes agency enforcement and consultation policies and provides instruction to ensure compliance with the federal Occupational Safety and Health Administration (OSHA) NEP for trenching and excavation. The goal is to ensure MIOSHA's procedures and policies are at least as effective as federal OSHA. It covers Enforcement Activity+ Outreach Activity (free CET services and free/low-cost trainings available!).

Due to the serious hazard, trenching/excavation worksites will continue to receive an increased amount of enforcement presence.

Definition Changes

Newly Added Definitions:

Benching Cave in Competent Person Protective System Ramp Registered Professional Engineer Sheeting Shoring Structural Ramp Tabulated Data (describes materials/loads)

Revised Definitions:

Excavation Hazardous Atmosphere Qualified Person Sides Soil Support System

Removed Definition:

Tight Sheeting

Clarification of Definitions:

Competent Person vs Qualified Person

Competent Person vs Qualified Person!

Newly Added Definition: Competent Person "Competent person" means an individual who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Revised Definition: Qualified Person "Qualified person" means an **individual a** person who, by possession of a recognized degree or certificate of professional standing, or who, by extensive knowledge, training, and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter and work.

Clarification of Definitions:

Competent Person vs Qualified Person

AND . . .

Support system vs Protective system

Competent Person

- Structural ramp design for access or egress. 933(6)
- Structural ramps for access/egress of equipment shall be designed by a competent person qualified in structural design. 933(6)
- Water control/prevention shall be monitored by a competent person or a monitoring system. 932(3)
- Ongoing inspections of an excavation/ trench. 932(4)
- After rainstorms or other hazardproducing occurrence, an inspection shall be made by a competent person for evidence of possible slides or cave-ins. If found, all work stops until additional shoring or reducing the slope, have been accomplished. Rule 932(4)
- Inspections of shoring, bracing, underpinning. Daily or more often.953(3)

Qualified Person

- A support system shall be designed by a qualified person. The design of the support system shall be maintained at the jobsite. Changes from the design shall be approved by a qualified person. 942(2)
- Shoring, bracing, underpinning designs shall be set forth by a qualified person knowledgeable in the subject area. 953(2)

*Support system: a structure, i.e., an underpinning, bracing or shoring which supports an adjacent structure, underground installation, or the sides of an excavation.

*Protective system: a method of protecting employees from cave-ins, or from the collapse of an adjacent structure. Includes support systems, sloping/benching systems, shield systems, etc.

Rule R408.40942, **Rule 942** Supporting systems; angle of repose; tie backs; tight sheeting; additional bracing.

Part 9, Excavation and Trenching, Changes

(3) Tie rods and other forms of tie backs used to restrain the top of sheeting shall be anchored a minimum of 10 feet. The measurement to the anchor point shall start at the intersection of an angle of repose with the surface of the soil retained. The tie back and anchor shall be capable of restraining any pressure exerted on the system.
(4) When tight sheeting or sheet piling is used, pressures due to existing ground water conditions shall be considered in the design. Sheet piling shall be driven to the predetermined depth set forth in the required design. Changes from the design shall be approved by the designer of the support system.

(5) Materials used for a supporting system shall be in good serviceable condition. When timbers are used, they shall be sound and free of large or loose knots.

(6) A supporting system shall include additional bracing approved by the designer of the support system when the sides of excavations are cut adjacent to a previous known excavation or a known fill, particularly when the separation between the previous excavation and the new excavation is less than the depth of the excavation.

(7) Tight sSheeting shall be braced or anchored at the bottom and along the vertical plane to prevent lateral movement.

(8) Protective systems for use in excavations more than 20 feet in depth must be designed by a registered professional engineer.

Recent Questions from Employers...

Question#1: Since protective systems include sloping and benching, does this mean a registered professional engineer is required to determine the proper slope or bench when doing an open-cut excavation more than 20 feet deep?

and Health Admin

Answer: Yes, protective systems do include sloping and benching. Protective systems for use in excavations more than 20 feet in depth must be designed by a registered professional engineer. Rule 942(8)

Question#2:Was Table 1 developed by a registered professional engineer and therefore suitable for use to determine the proper slope or bench by a competent person and satisfy the requirement ? **Answer:** Table 1, while based on sound engineering practices, it is not appropriate for use in excavations more than 20 feet in depth. Rule 942(8)

Recent Questions from Employers...

Question#3: Can an employer build their own protective system when doing an open-cut excavation more than 20 feet deep? Answer: Yes, employers can build their own protective systems; however, protective systems for use in excavations more than 20 feet in depth must be designed by a registered professional engineer. During inspections, MIOSHA will request a copy of engineer approvals and data tables/text sheets. Rule 942(8)

and Health Admin

Question#4:Can trench boxes be stacked?

Answer: Maybe; refer to each protective systems' manufacturer's specifications to ensure each protective system is used appropriately; the tabulated data will state if trench boxes are allowed to be stacked.

This is the reason job planning is extremely important!

One System Does Not Fit All . . .

- Protective Systems must be appropriate for the application!
- The side of an excavation more than 5 feet deep shall be sloped as prescribed in Table 1, unless supported as prescribed. Rule 941(1)
- An excavation less than 5 feet in depth shall be protected when examination of the ground indicates hazardous earth movement may be expected. Rule 941(2)
- The angle of repose and design of the supporting system shall be based on:
 - Depth of cut and type of soil.
 - Possible variation in the water content of the material while the excavation is open.
 - Anticipated changes in the material due to exposure to air, sun, water, or freezing temperatures.
 - Load imposed by structures, equipment.
 - Vibration from traffic, equipment, or blasting.
- A support system (for excavations up to 20 feet in depth) shall be designed by a qualified person. The design of the support system shall be maintained at the jobsite. Changes from the design of the support system shall be approved by a qualified person. Rule 942(2)
- Protective systems MUST be designed by a registered professional engineer, when excavations are more than 20 feet in depth. Rule 942(8)

Each Employer MUST Have a Plan to Keep Exposed Employees Safe!

MIOSHA's State Emphasis Program (SEP) for Heat-Related Illness, Instruction issued 7/27/23, renewal due 1/15/25

- In response to temperature extremes due to global warming, OSHA issued a National Emphasis Program (NEP) for Outdoor and Indoor Heat-Related Hazards in April 2022 to prioritize heat-related illness prevention.
- MIOSHA's instruction adopted the OSHA NEP as an SEP, with modifications.
- On heat advisory days and excessive heat warning days, the SO/IH will expand the scope of their on-site inspections to include an evaluation of the employer's heat-illness prevention program.
- GOAL: MIOSHA will conduct at least 24 inspections under this SEP each fiscal year.

Each Employer MUST Have a Plan to Keep Exposed Employees Safe!

Heat Stress . . . Each Employer MUST Have a Plan to Keep Exposed Employees Safe!

NOAA's National Weather Service

Heat Index

Temperature (°F)

		80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
	40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
	45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
Humidity (%)	50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
	55	81	84	86	89	93	97	101	106	112	117	124	130	137			
	60	82	84	88	91	95	100	105	110	116	123	129	137				
	65	82	85	89	93	98	103	108	114	121	126	130					
	70	83	86	90	95	100	105	112	119	126	134						
ve	75	84	88	92	97	103	109	116	124	132		•					
lat	80	84	89	94	100	106	113	121	129								
Re	85	85	90	96	102	110	117	126	135								
	90	86	91	98	105	113	122	131									
	95	86	93	100	108	117	127										
	100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Streuous Activity

Danger

Caution

Extreme Caution

Extreme Danger

Each Employer MUST Have a Plan to Keep Exposed Employees Safe!

Heat Stress . . . Each Employer MUST Have a Plan to Keep Exposed Employees Safe!

Heat-related illnesses:

- Heat Stroke
- Heat Exhaustion
- Heat Cramps

- Heat Collapse (fainting)
- Heat Rashes
- Heat Fatigue
- CSHO will verify illnesses by reviewing the 300 log, incident reports, worker's compensation records, and employee interviews.

Each Employer MUST Have a Plan to Keep Exposed Employees Safe!

Heat Exhaustion

Heat Stroke





Stay Cool, Stay Hydrated, Stay Informed!



Each Employer MUST Have a Plan to Keep Exposed Employees Safe!

HEAT EXHAUSTION

DIZZINESS & FAINTING EXCESSIVE SWEATING RAPID, WEAK PULSE NAUSEA OR VOMITING

COOL, PALE CLAMMY SKIN

MUSCLE CRAMPS



THROBBING HEADACHE NO SWEATING RAPID, STRONG PULSE NAUSEA OR VOMITING RED, HOT DRY SKIN

HEAT STROKE

MAY LOSE CONSCIOUSNESS

Each Employer MUST Have a Plan to Keep Exposed Employees Safe!

MIOSHA's State Emphasis Program (SEP) for Heat-Related Illness, Instruction issued 7/27/23, renewal due 1/15/25

- MIOSHA does not have a specific regulation for working in hot environments. Any proposed citations for heatrelated illnesses will be addressed by the general duty clause, section 11(a) of the Michigan Occupational Safety and Health Act (Act 154 of the Public Acts of 1974, as amended).
- Heat-related illness citations will be issued for indoor and outdoor work activities but must be issued only when all elements of a general duty clause violation are documented, and IH can establish a link between the workplace exposure and the potential for heat-related illness(es).

Each Employer MUST Have a Plan to Keep Exposed Employees Safe!

Other than General Duty, what other rules apply?

- The accident prevention program (APP) required by Construction Standard Part 1, General Rules, covers the hazard of heat.
- Provision of Potable Water as required by Construction Standard Part 1, General Rules.
- Recording and Reporting of Heat-Related Illnesses per Administrative Standard Part 11.
- Provision of at least 1 person at the site who has a valid certificate in first aid training per Construction Standard Part 1, General Rules.

Each Employer MUST Have a Plan to Keep Exposed Employees Safe!

Heat-Illness Prevention Program (HIPP) . . . a Plan to Keep Exposed Employees Safe!

HIPP Elements Should include:

- Acclimatization Program
- Designated Break Areas (shaded or climate controlled)
- Provision for potable drinking water (required regardless of temperature per Part 1 Rule 128)
 - Electrolyte-replenishing liquids and popsicles (best practice)
- Increase number of breaks taken in cool areas
- Move work schedules to cooler portion of the day
- Use cooling PPE (best practice)
- Training on signs/symptoms of heat-related illnesses, importance of hydration, when to hydrate
 - Goal is to have clear urine (general goal for most healthy adults).
- Training on risk factors (medications, high use of caffeinated beverages, high use of alcohol beverages, pre-existing health conditions.

Each Employer MUST Have a Plan to Keep Exposed Employees Safe! Examples of PPE to prevent Heat Induced Illness (Not a Requirement – but BEST PRACTICE)

- Cooling vests/shirts (ice packs or other cooling mechanisms incorporated into the vest or shirt)
- Cooling neck towels, bandanas, and hats
- Cooling pads to insert into a hard hat
- Cooling vortex fans incorporated into a poweredair purifying respirator (PAPR) or air supplied helmet-style respirator

Each Employer MUST Have a Plan to Keep Exposed Employees Safe!

What is Respirable Crystalline Silica (RCS) and what are its hazards?

- Per the MIOSHA Standard Part 690, the term "silica" refers specifically to the compound silicon dioxide (SiO2).
 - Silica is a major component of sand, rock and mineral ores.
- RCS means quartz, cristobalite, and/or tridymite contained in airborne particles that are determined to be respirable by a sampling device (with a cyclone attachment).
- Exposure to RCS can cause:
 - silicosis (an irreversible, often disabling fatal lung disease)
 - Latent Tuberculosis to activate
 - Increased risk of lung cancer
- THE HIGHER THE CUMULATIVE EXPOSURE, THE HIGHER THE RISK!!

Each Employer MUST Have a Plan to Keep Exposed Employees Safe! Silica . . . MIOSHA State Emphasis Program (SEP), Instruction issued 11/2/22 (due for review)

- This SEP was established to reduce employee exposures to Respirable Crystalline Silica and prevent silicosis.
- In 2016 the US Occupational Safety and Health Administration (OSHA) amended its standards for RCS based on research that showed that the old exposure limits for RCS did not adequately protect worker health.
- MIOSHA's adopted the federal standards for RCS in 2017 as the MIOSHA Standard Part 690.
- MIOSHA will attempt to conduct at least 68 inspections under this SEP each fiscal year.

Each Employer MUST Have a Plan to Keep Exposed Employees Safe!

How does an employer comply with Part 690?

- 1. A written Silica Exposure Control Plan.
- 2. Provide training so all covered employees can demonstrate knowledge and understanding.
- 3. Compliance with Table 1 in the Standard -or- Air Monitoring Data -or- Objective Data.
- 4. Medical Surveillance program for employees required to use a respirator for 30 or more days per year (medical exam, PFT, x-ray, TB test, etc. within 30 days of assignment).
- 5. The employer shall make exams available to affected employees at least every 3 years (unless requested more often by physician).
- 6. Fully implemented Respiratory Protection Program, as required.

Each Employer SHOULD Have a Plan to Keep Exposed Employees Safe!



Visit the MIOSHA Booth

Enter to Win a Basket of Goodies, place your telephone number on your sign-up card before dropping it in the bowl!

Enter for a Chance to Win!

Sign up by filling out this card with your name and email address.

Name



Email Address

MIOSHA Training Institute • CET Events • MIOSHA News • MIOSHA Standards • Radiation Safety

11/22

Drawing will be Wednesday (4/17) at 11am. Must be present to win.

MIOSHA Stay Connected



- MIOSHA News available online quarterly
- □ MIOSHA eNews sent via email monthly
- MIOSHA GovDelivery E-mails Sign-up on MIOSHA website: www.michigan.gov/miosha



Follow @MI_OSHA on Twitter



Like MichiganOSHA on Facebook



MIOSHA on YouTube

Thank You For Making a Difference in Safety and Health!!

Questions

