

Give 'Em A Brake

By: *Janet Foran*

MDOT Communications

Give 'em a Brake...a work zone safety awareness coalition representing union road workers, law enforcement, road builders and transportation interests, is urging motorists to slow down in work zones and watch out for workers. For years, this coalition has spon-

zone crashes in this time period. We are very concerned about this upward trend," said DeSana.

This year's campaign theme is "Give 'em a Brake — Slower Speeds Save Lives." The campaign kicked off with a news conference in Lansing at the State Capitol on May 10th, and includes state-wide billboards and radio and TV spots.

The billboard features four actual road construction workers: **Herbey Garza** of Lansing, Construction Laborers Local 998; **Dave Hughes, Jr.**, of Charlotte, **Bennie Griffin** of Detroit, and **Debra Harris** of Baldwin, all with Construction Laborers Local 1191. The construction workers are employed by C&D Hughes, Inc., a Char-



MDOT press conference May 10th, at the Capitol.

sored a statewide safety campaign called "Give 'em a Brake," designed to remind motorists to drive safely, as Michigan's largest-ever construction season gets underway.

"Safety in work zones is one of our top priorities," said State Transportation Director **James DeSana**. "We're working hard to make work zones more motorist-friendly, but drivers must do their part to ensure safety for everyone."

"Alarmingly, there has been a 30 percent increase in construction zone crashes in 1997 and 1998 over the early 90s. There was also a 24 percent jump in injuries resulting from construction

lotte-based road construction company.

"This year, the campaign slogan, Slower Speeds Save Lives, will inform motorists that they need to slow down and be careful when entering a construction zone," said **Sam Hart**, business manager, International Union of Operating Engineers Local 324. "Construction zones are full of real workers, not just orange barrels and flashing lights. Everyone is entitled to a safe workplace and the roadways are these workers' workplace. By slowing down when entering construction zones, motorists can help keep workers safe."

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Consumer and Industry Services



From the Bureau Director's Desk

*By: Douglas R. Earle, Director
Bureau of Safety & Regulation*

Construction is one of the most hazardous industries in Michigan. The **Construction Safety Division** in the MIOSHA Program is one of the few "formal" construction safety enforcement programs in the U.S., and provides a special emphasis on the high-hazard construction industry. Their mission is to help assure safe employment for construction workers in Michigan through identification of hazards.

Among the reasons for the increased hazards in this industry is that conditions are rapidly changing on a typical construction site. Conditions can change more in a few days or a few weeks on a construction site than they are likely to change in months or years at some manufacturing facilities. These changing conditions must be addressed through a comprehensive and actively implemented accident prevention program.

In past issues, I've talked about the **MIOSHA Strategic Plan**. One of our three strategic goals is: To improve workplace safety and health for all workers, as evidenced by fewer hazards, reduced exposures, and fewer injuries and illnesses. A key target area in the implementation of this goal is to reduce construction fatalities by 15 percent. We hope to reduce those numbers by focusing attention and resources on preventing the four most prevalent types of workplace injuries and illnesses. (See sidebar.)

MIOSHA has historically developed partnering activities with our "stakeholders" to achieve common workplace safety and health goals. August 1, 1998, MIOSHA signed its first formal Partnering Agreement with the **Michigan Roadbuilders Association** pledging to work together to improve safety and health in this extremely dangerous industry. MIOSHA has dedicated overtime for Construction Safety Officers to help address highway construction hazards, as well as highly recognized dangers in other types of construction. MIOSHA has formed a similar partnership with **Associated General Contractors (AGC), Michigan Chapter**, and presents construction safety training at AGC's annual Construction Safety Day.

This issue of the **MIOSHA News** is dedicated to providing information to help employers reduce construction injuries, illnesses and fatalities. Heat stress and asbestos exposure also present potential hazards for construction workers. See Page 4 for up-to-date information from MIOSHA professionals on these topics. Our lead article is from the Michigan Department of Transportation and focuses on summer safety in Michigan's highway construction zones. **It's important for all of us to remember that highway construction workers, too, would like to go home to their families at the end of the day.** ■

Construction Safety

Only about four percent of Michigan's workforce is employed in construction. Construction fatalities, however, account for more than 40 percent of all MIOSHA program-related fatal workplace accidents.

1998 Construction Fatalities By Major Cause

Electrocution	8
Fall	8
Caught Between	6
(Cave-in 1)	
Struck By	6
(Struck by Traffic 0)	
Other	1
(Asphyxiation 1)	
Total	29

The hazards in the construction industry can be addressed through a comprehensive and actively implemented accident prevention program.

MIOSHA Accident Prevention Program Major Components

- ◆ Designate Qualified Person to Administer Program
- ◆ Train Employees in Assigned Tools & Equipment
- ◆ Inspect Site for Unsafe Conditions and Correct Hazards
- ◆ Instruction in Recognition and Avoidance of Hazards (Tool Box Talks)
- ◆ Haz-Com, Confined Space Training
- ◆ Emergency Procedures

The above components can be found in construction, Part I, General Rules Standards.

Construction Safety Division
517.322.1856

LucasVarity MVPP Celebration

By: *John Wilkerson*
LucasVarity Communications

It's official!

The **LucasVarity Fenton Plant** became the first facility in the State of Michigan to be awarded the **Michigan Voluntary Protection Program (MVPP) Merit Status** for excellence in Safety and Health on April 8, 1999. The MVPP was awarded through the Department of Consumer and Industry Services, Bureau of Safety and Regulation.

The road was a long one, but thanks



BSR Deputy Director Deborah Grether presents the MVPP Merit Award to the LucasVarity Safety Team.

to the efforts of the **Safety Team** and to everyone in Fenton who helped to compile an outstanding safety record, it was a successful journey.

The process to obtain the MVPP award began in November 1997 with an application which included the plant's safety record such as recordable incidents, lost work days, along with basic information such as number of employees, types of manufacturing processes used, etc. Many thanks go to **Jeff Powers**, Director of Environmental, Health and Safety at the corporate offices for helping to complete a long and complicated application process.

After the plant's initial application approval, a Team from the Bureau of Safety and Regulation visited Fenton for one week, interviewing and scrutinizing our health and safety program. We were then required to submit a corrective action plan addressing any deficiencies in our program falling short of the

high standards set for MVPP Merit Status. After we submitted this action plan, we were notified of our Merit Status in November of 1998.

On April 8, Fenton was pleased to host a number of distinguished guests, including **State Representative Paul DeWeese**, **Fenton Mayor Sue Osborne** and members of the **Fenton Chamber of Commerce**. A contingent of representatives from the Bureau of Safety and Regulation were also on hand at the celebration. They included Deputy Director **Deborah Grether**; Chief of the Safety, Education and Training Division **Maryann Markham**; and BSR/MVPP Team Members **Joseph Agboka, Ph.D.**, **David Luptowski** and **D.W. Johnson**.

The entire plant was invited to the ceremonies held in a festive atmosphere in a tent just outside the plant. Opening speeches were given by **Mark Kline**, Safety/Training Specialist, and by **Ron Pratt**, Plant Manager.

"We should be very proud of this organization," said Ron Pratt. "The Fenton plant has always worked as a team, and this is another great example of how we work together and watch out for one another. I would like to give special recognition to the Safety Team, which was formed in 1988 and has been a part of the plant almost since its existence. They have instituted some great training and incentive programs to keep us working safely, and I salute them and everyone in the plant for this achievement."

One of the highlights of the MVPP ceremony came as **State Representative Paul DeWeese** gave his personal tribute to Fenton's safety commitment. "As an emergency room physician, I am very aware of the trauma that occurs to a person and their family when an injury occurs on the job. It is critical for our work places to be safe for all employees. We can never allow profits to be a higher priority than people. That is why I am so proud to be your State Representative. You have demonstrated your commitment to ensure that each person who works at LucasVarity Fenton will be safe," Mr. DeWeese said.

Next came the moment we had worked for over the past 18 months, the awarding of the MVPP signifying that the Fenton plant had achieved merit status. Deborah Grether said that the Bureau of Safety and Regulation had sought the "best of the best" for the first MVPP award. "You are the only merit plant in the State of Michigan, and I am very pleased to award the MVPP plaque to the LucasVarity Fenton plant."

As Deborah indicated, reaching the merit level is a step on the way to our ultimate goal, becoming a Star Status plant. We'll be eligible to qualify for Star Status in November 1999, and it would be a great way to head into the new century knowing the Fenton plant has the highest regard for the health and safety of all of its employees.

Congratulations to the Fenton Team! ■



State Rep. Paul DeWeese pays tribute to LucasVarity.



Asbestos

What's Going on with Asbestos in Michigan?

By: *George Howard, Asbestos Program Supervisor*
Bill DeLiefde, OHD Regional Supervisor

Nationwide, an estimated 1.3 million employees in construction and general industry potentially face significant asbestos exposure on the job. Heaviest exposures occur in the construction industry, particularly during building renovation or demolition activities where asbestos is disturbed or removed. Employees may also be exposed during the manufacture of asbestos products (such as textiles, friction products, insulation, and other building materials) and during automotive brake and clutch repair work.

If your work involves asbestos-containing materials, it is important to recognize an employer's responsibilities under MIOSHA concerning exposure monitoring, regulated areas, engineering controls and work practices, respiratory protection, protective clothing, hygiene facilities for employees, communication of the hazards associated with asbestos in construction activities, housekeeping, medical exams, and record keeping.

Why regulate asbestos?

Asbestos is a mineral that has been used in more than 3,000 different products over the last 100 years for its insulating, acoustical and fire protective properties. Common products that contain asbestos are pipe insulation, floor and ceiling tile, spray-on insulation, boiler wrap insulation and electrical appliances such as your toaster and hair dryer. Asbestos-containing materials are frequently encountered in a wide range of environments, including but not limited to, industrial and commercial facilities, schools and universities, and residential properties.

Asbestos is actually the name of a group of minerals that share similar chemical and physical properties. The most common of these minerals are chrysotile, amosite, and crocidolite. The primary characteristic that makes asbestos a reason for concern is its ability to separate into microscopic needle-like fibers. Once these fibers become airborne (usually by disturb-

ing the product in which they are contained), they are easily inhaled into the lungs. Once in the lungs, these needle-like fibers can penetrate the lung tissue and the lining that holds the lung in place (pleura). This begins the process which can eventually lead to one of the three commonly associated diseases of asbestos:

- ◆ **Asbestosis** - A scarring and hardening of the lung tissue,
- ◆ **Lung cancer** - Malignant tumor growth of the lung tissue,
- ◆ **Mesothelioma** - A scarring and malignant tumor of the lung lining.

All of these diseases can lead to death. Exposure to asbestos is also associated with increased incidences of gastrointestinal cancer. Epidemiological studies indicate that the risk of lung cancer among exposed workers who smoke cigarettes is greatly increased over the risk of lung cancer among non-exposed smokers or exposed nonsmokers. Therefore, smoking among asbestos workers is strongly discouraged.

The key to preventing occupational illnesses/diseases involving asbestos is to initially recognize products that may contain asbestos and assure that employees are properly trained, protected and equipped to work with these products in a safe manner.

Who is the primary asbestos enforcement agency in Michigan?

The Occupational Health Division's (OHD) Asbestos Program is responsible for the enforcement of most Michigan asbestos regulations. The Asbestos Program is a section within the Department of Consumer & Industry Services, Bureau of Safety & Regulation. The Asbestos Program has the following six major areas of responsibility.

1) Accreditation of Workers

Asbestos abatement workers, supervisors, project designers, inspectors and management planners must be appropriately trained and accredited before working in Michigan. Individuals who work as abatement workers, supervisors, project design-

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Heat Stress

By: *Ed Fredericks, I.H.*
BSR Occupational Health Division

It can happen when you're playing on the weekend. It's always serious. But when it happens at work it can be an issue for the Michigan Occupational Safety and Health Act (MIOSHA) program.

Work Factors

Four environmental factors affect the amount of stress a worker faces in a hot work area: temperature, humidity, radiant heat (such as from the sun or a furnace) and air velocity. Perhaps most important to the level of stress an individual faces are personal characteristics such as age, weight, fitness, medical condition and recent experience working in heat.

What types of work settings are prone to causing heat-related illness in workers?

Workers performing vigorous work in direct sunlight; workers exposed to direct sunlight for long periods; workers in plants where heated processes are involved (forging, annealing, heat-cured products); and workers performing work in enclosed spaces with little or no ventilation which receive exposure to sunlight; are all examples of work environments that could cause heat-related illnesses.

Signs and Symptoms

Employers and employees should be aware of the signs and symptoms of heat related disorders.

◆ **Heat stroke**, the most serious illness, is caused by the failure of the body's internal mechanism to regulate its core temperature. Sweating stops and the body can no longer rid itself of excess heat. Signs include mental confusion, delirium, loss of consciousness, a body temperature of 106+ degrees, hot dry skin which may be red, mottled or bluish.

◆ **Heat exhaustion** results from the loss of fluid through sweating when a worker has failed to drink enough fluids or take in enough

Cont. on Page 16

Safety Professional of the Year

The **69th Annual Michigan Safety Conference** honored Richard Kennedy and Gerald Ouellette as Safety Professional of the Year at the President's Reception on Monday, April 19, 1999. This prestigious award is the highest honor the Conference bestows to outstanding safety professionals in Michigan. Each honoree demonstrated outstanding technical expertise in their field, developed innovative ideas and programs, and made significant contributions to advance their profession.



Richard Kennedy
Occupational Safety Consultant
Consumer & Industry Services
Bureau of Safety & Regulation
Safety Education & Training Division

Richard "Dick" Kennedy has more than 17 years experience as a construction safety consultant and provides apprentice and consultation services for the western side of the state. As a MIOSHA employee, one of his main responsibilities is to work with contractors in helping them identify safety hazards at job sites. He has been instrumental in the start-up of the MIOSHA 10-Hour Construction Seminar and has developed programs on accident prevention, hazard recognition, trenching and excavation, personal protective equipment, fall protection and highway safety. Dick has been a speaker at the Michigan Safety Conference since 1985 on behalf of the MIOSHA Construction and SET Divisions. He received the Allan W. Harvie Meritorious Service Award in 1994, presented to an individual in MIOSHA who has made an ongoing significant contribution in furthering the Bureau's objective of protecting Michigan workers, encouraging innovation in meeting Bureau goals and fostering the spirit of teamwork. Dick has been a presenter at numerous seminars, as well as a certified police officer on a volunteer basis for the Ottawa County Sheriff's Department.



Dick is congratulated by BSR Director Doug Earle.

Dick's family joined him at the Awards Ceremony.



Gerald W. Ouellette,
CSM, CHCM, ASP
Manager of Environmental
& Safety Services
Americas-Asia Pacific Region
Pharmacia & Upjohn Company



Gerald Ouellette has more than 20 years experience in the fields of environmental safety and industrial hygiene with an emphasis in industrial safety, occupational health, emergency preparedness, fire safety and loss control, security, training, product liability, and air, water and hazardous waste management. He is chair of the Safety Management Division, Michigan Safety Conference, and past-president of the Safety Council for West Michigan. He is a member of the American Society of Safety Engineers, World Safety Organization, West Michigan Fire Protection Engineers, and is a Certified Hazard Control Manager, Associate Safety Professional. Gerald has developed and presented seminars and training classes on related safety, industrial hygiene, environmental, engineering and health subjects. He is an instructor at Kellogg Community College, Battle Creek, where he teaches courses on plant layout and material handling. As a member of the corporate environmental quality and safety staff of Pharmacia and Upjohn, he provides worldwide safety, industrial hygiene, environmental, loss control, emergency response, and health services—for animal health, research and development, and production facilities.



Dick with SET Supervisor Mike Everett and Construction Safety Officer Tony Allum.

Safety Council for West Michigan 52nd Annual Safety Awards

The Safety Council for West Michigan announced the recipients of the 1998 Safety Awards for West Michigan at the 52nd Awards Luncheon April 13, 1999, at the Fetzer Center, Western Michigan University. For the past 52 years, the Safety Council has recognized and awarded business and industry for maintaining safe work practices. The Safety Council for West Michigan is the only organization in West Michigan that acknowledges the efforts that business and industry make to provide a safe workplace for their employees.

Approximately 6,000 businesses and industries in 18 counties were invited to participate by providing their accident rates for 1997 and 1998. Companies compete for the awards with other businesses and industries similar in size, and also compete with themselves by submitting their rates from the previous year. The information required for partici-

pation in the awards program is taken directly from a company's MIOSHA 200 Log, which is posted during February. All information submitted to the Safety Council is held in confidence and no rates were announced or listed.

Dr. Kalmin Smith, Deputy Director of the Department of Consumer & Industry Services (CIS), was the keynote speaker at the luncheon. Smith's duties include oversight of eight CIS bureaus and agencies including the Bureau of Safety and Regulation (BSR), which houses the MIOSHA program and the state's Wage & Hour Division. Dr. Smith is also the State Coordinator for the implementation of the Americans with Disabilities Act for the 50,000 state employees, as well as all state parks, public buildings, and highway rest stops.

More than 300 employers and employees attended the awards recognition. One hundred and ten companies received recognition and were congratulated for successfully maintaining a safe workplace or improving accident rates in the following three categories: Greatest Reduction in Acci-

dent Rate-1998, Lowest Accident Rate-1998, and No Lost Time Accidents-1998.

The awards were presented by **Mary Gustas**, Executive Director of the Safety Council for West Michigan and **Micshall Patrick**, BSR Safety Education and Training Consultant and Vice President of the Safety Council Board of Directors. ■



Keynote speaker BSR Deputy Director Dr. Kalmin Smith and Mary Gustas, Safety Council Executive Director.



SET Consultant and Safety Council Vice-President Micshall Patrick presents the award for Greatest Reduction in Accident Rate/1998-Group 5, to Mac McLemore, Safety Director for Midwest Metallurgical.

Safety Council for West Michigan

437 W. Crosstown Parkway
 Kalamazoo, MI 49001

616.344.6189

Executive Director
 Mary Gustas

MIOSHA Hosts Scientists... ...from Balkan Countries

By: *Bob Pawlowski*
OHD Regional Supervisor

October 7 - 17, 1998, 11 Balkan scientists visited Michigan to participate in an **Advanced Environmental Workshop** with the Michigan State University (MSU), Institute of International Health (IIH), funded by the U. S. National Institutes of Health. The program is a collaboration of information and ideas on environmental and occupational health including: seminars, research projects, field trips and other activities.

The American visit completed year two of a five-year grant, which also includes representatives from IIH traveling to Balkan countries to provide training. Representative scientists from Bulgaria, Greece, Macedonia, Moldova, Romania, and Serbia participated with **Evangelos Petropoulos, M.D., Ph.D.**, Director of IIH and professors from MSU.

Of the 11 days spent in Michigan, the Bureau of Safety and Regulation (BSR) Occupational Health Division (OHD) hosted the participants for one and a half days. The participants spent a half day at OHD's occupational health laboratory located at 3350 N. Martin Luther King Jr. Blvd. in Lansing.

Mary Ruppenthal, OHD Laboratory Scientist conducted a tour of the OHD laboratory describing analytical equipment and procedures used to analyze samples collected during MIOSHA health investigations. **Bob Kieffer** of the OHD Technical Services Section fol-



The Balkan representatives with the OHD Farmington staff.

lowed with a presentation on field monitoring equipment used to collect samples by OHD compliance and consultation officers. Samples collected by field compliance IH's are typically personal breathing zone air samples (the collection device is physically attached to the employee) to determine compliance with the Michigan Air Contaminants Standard's permissible exposure limits (PEL).

The Balkan visitors were impressed with the variety of collection devices and analytical equipment used to assure a

Gerald Dike, OHD industrial hygienist (2nd from R) and Bogoljub Perunicic (2nd from L) with employee and employer representatives.



healthy working environment and compliance with the PEL's. The rest of the afternoon consisted of a presentation on MIOSHA and how the different departments and divisions dealing with environmental and occupational health interact to cover the many aspects of public health that are addressed by state agencies. The presentation was conducted by **Bob Pawlowski**, OHD Regional Supervisor.

The next day, six of the Balkan scientists traveled to the Farmington OHD office, where they each accompanied a compliance industrial hygienist during a field investigation. They all returned to the Farmington office at the end of the day, at which time a question and answer session was conducted with Bob Pawlowski and district supervisors **Sundari Murthy** and **Adrian Rocskay**.

Visitor comments were positive including compliments on the professional manner in which investigations were conducted and how well compliance officers worked with employees and employers. One Balkan scientist stated there was an obvious atmosphere of mutual respect shown between the companies' health and safety representatives and the OHD industrial hygienist. Dr. Petropoulos said our presentations and activities were highly rated in the written evaluations of the program. The OHD staff also found the collaboration to be enlightening and an excellent learning experience. ■

Wage & Hour

Youth Employment

News

Prevailing Wage

Michigan teenagers looking for a summer job have a very good chance of finding one, according to the Michigan Department of Career Development. Michigan's labor market continues to be strong, which gives young people the opportunity to earn money and acquire work skills.

While it is important for young people to have constructive early work experiences, it is equally important that their jobs are safe. The MIOSHA Wage & Hour Division is committed to assuring the safe employment of young people. When businesses provide teens with positive and safe work experiences, everyone wins.

Act 90, PA of 1978, The Youth Employment Standards Act, provides for the legal employment and protection of youth, under the age of 18, who work. Youth are restricted in who they may work for and the type of work they may perform.

Minors may not work in the following industries: logging, mining, firefighting, excavation, heavy equipment, meat processing, construction, or in industries wherein they are required to use respiratory equipment. Youth cannot do work which requires them to drive a motor vehicle in the performance of their jobs. Minors may not operate power-driven machinery, such as slicers, dough mixes, saws, etc.

Besides these specific restrictions, the general duty clause of Act 90 prohibits employing minors in occupations which are hazardous or injurious to their health or well-being. In addition to these restricted and prohibited occupations, the safety and health standards that apply to adults under MIOSHA also apply to minors.

A work permit is required from the school before a minor may work. During the summer recess school offices are open and able to issue work permits.

Parents are encouraged to visit their child's place of employment to get to know the employer and the types of jobs available, and in particular, what work their child will be doing.

The Wage & Hour Division offers on-site consultation to businesses on youth employment issues. Employers can request a consultation by calling the Wage & Hour Division.

The Wage & Hour Division is responsible for establishing and issuing state prevailing wage rates for state-covered construction projects. Two of the rate schedules established are the Commercial Schedule for Construction of Buildings and the Road Builder Schedule for Road and Highway Construction. The process used to establish these rates is directed by the Michigan Prevailing Wage Act, Act 166 of 1965, and is an annual survey of union trade locals to obtain rates contained in local collective bargaining agreements.

The Commercial Rate Schedules are updated in the fall and are ready for distribution by January. These rates generally remain in effect until December 31. Road Builder Rate Schedules are updated each July and remain in effect until the following June 30. The process of updating road builder rates begins in June, and rates will be established for each county.

The Division also issues state prevailing wage rates for bid purposes to contracting agents. Rates are good for 90 days from the issue date. Rates are provided free-of-charge to contracting agents. Rates for non-bidding purposes are also provided to the general public at a minimal fee or free-of-charge on the Division's website.

Conditions for Youth Employment

- 14- to 15-year-old minors cannot work between the hours of 9:00 p.m. and 7:00 a.m.
- 16- to 17-year-old minors cannot work between the hours of 10:30 p.m. and 6:00 a.m., while school is in session.
- 16- to 17-year-old minors may work until 11:30 p.m., during school vacation. The total hours of work cannot exceed 48 hours of work and school combined.
- Minors must be supervised.
- Minors may not work more than five hours without a full, 30-minute rest period.

For More Information:

Wage & Hour Division
517.322.1825

Website:
[www.cis.state.mi.us/
bsr/divisions/wh/home.htm](http://www.cis.state.mi.us/bsr/divisions/wh/home.htm)

SET Awards

State Gives Safety and Health Awards

Eight Michigan companies have received Safety Education and Training (SET) Awards as of June 1999. The SET Division of the Michigan Department of Consumer & Industry Services (CIS), Bureau of Safety and Regulation recognizes the safety and health achievements of Michigan employers and employees through SET Awards, which are based on excellent safety and health performance.

The **SET Gold Award** recognizes two years of an outstanding MIOSHA record, the **SET Silver Award** recognizes one year of an outstanding MIOSHA record, the **SET Bronze Award** recognizes employers who have made a measurable improvement, and the **Ergonomics Innovation Award** recognizes innovative ideas which have been implemented to reduce worker strain.



BSR Deputy Director Dr. Kalmin Smith presents the Gold Award to Tom Peck, Production Manager, Palmer Engineering.

“These companies are outstanding examples that emphasize the importance of workplace safety,” said **CIS Director Kathy Wilbur**. “They are demonstrating that it’s possible to maintain an accident-free work environment and still be economically competitive.”

Palmer Engineering, Inc., a Demmer Affiliate, of Lansing, received the SET Gold Award. **CIS Deputy Director Dr. Kalmin**



Mike Everett, SET Supervisor; Bobby Stout, SET Consultant; with James Hill, Vice-President, and David Jackson, President, G & L Tool, Inc.

Smith presented the award to **Dave DeSmyter**, Plant Manager, **Tom Peck**, Production Manager, and **William Demmer** of Palmer Engineering on April 27, 1999. Palmer Engineering was founded in 1948 and is a QS 9000 stamping facility that manufactures small precision stampings. It became affiliated with the Demmer family in 1987 and employees 34 workers.



Mike Arno, Plant Manager, Mark Pritchard (rear), Inventory Control Manager, and Dave Feldman, Manufacturing Manager, Miller Fluid.

SET Supervisor **Mike Everett** presented the Gold Award to **Miller Fluid Power of Livonia**, and the Silver Award to **G & L Tool of Westland**. Miller Fluid Power is primarily involved in the manufacturing of precision pneumatic and hydraulic cylinders for industry and commercial use and employs 20 workers. G & L Tool is one of the leading suppliers of header tools and special tooling and also has 20 workers.

A Gold Award was presented to **Tenneco Automotive Engineering Center of Grass Lake** at an employee celebration. Bronze Awards were received by **The Crown Group of Livonia**; **Acutus Gladwin of Taylor**; and **Koyo Corporation of Battle Creek**. **Gilreath Manufacturing of Howell** received the Ergonomics Innovation Award. ■

Construction Safety Standards Commission

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 Mr. Carl Davis**
 Mr. Andrew Lang
 Mr. Martin Ross

Management

Mr. Thomas Hansen
 Mr. Charles Gatecliff
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Occupational Health Standards Commission

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 Ms. Cynthia Holland
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Management

Mr. Robert DeBruyn
 Mr. Michael Lucas
 Mr. Richard Olson
 Mr. Douglas Williams**

Public Member

Dr. Glen Chambers

*Chair

**Vice Chair

Standards Update

Confined Space Entry

On December 1, 1998, OSHA published amendments to the permit-required confined spaces standard in the Federal Register. The amended rules speak to employee participation in the confined space entry program and the opportunity to observe related testing and monitoring. The criteria for preparing for the timely rescue of any incapacitated permit-space entrant is also addressed.

Part 90 was originally adopted by MIOSHA by reference on November 2, 1993. The **Occupational Health Standards Commission** and the **General Industry Safety Standards Commission** have determined that to be "as effective as" OSHA, the final rule amendment should be incorporated into MIOSHA's current standard and have directed that the promulgation process be implemented. The amended standards are expected to be final this summer.

Public Hearing

The MIOHSA Standards Division is holding public hearings for the **General Industry Safety Standards Commission** for the following proposed amendment: General Industry: Part 62. Plastic Molding; R 408.16227 Lubrication and Maintenance; and R 408.16234 Injection Molding Machinery.

August 17, 1999

Liquor Control Commission
 Liquor Control Hearing Room
 24155 Drake Road
 Farmington, Michigan
 9:30 a.m. - 1:00 p.m.

August 19, 1999

Ferris State University
 Rankin Student Center
 Room 312 - Centennial Room
 805 Campus Drive
 Big Rapids, Michigan
 9:30 a.m. - 1:00 p.m.

The purpose of the hearings is to allow all interested parties an opportunity to present data, views, and arguments relative to the proposed amendments. Attendees are urged to submit a written summary of remarks as part of their presentation. Written comments for each set of proposed rules must be submitted as separate documents.

Persons unable to attend may submit written data no later than 5:00 p.m., August 19, 1999. Copies of the amendments may be obtained from the address listed on page 16. A copy of the rule also appears in the Michigan Register, June, 1999.

The hearings will be conducted in compliance with the 1990 Americans with Disabilities Act, in an accessible building with handicapper parking available. For a sign language interpreter or assisted listening devices, please call 517.373.0378 TDD or 1.800.SAY.ABLE T/V.

To contact Connie Munsch, Chief of the Standards Division, or any of the Commissioners, please call the Standards Division Office at 517.322.1845.

Status of Pending Michigan Occupational Safety & Health Standards

Occupational Safety Standards

General Industry

Part 21.	Powered Industrial Trucks	At Advisory Committee
Part 55.	Explosives and Blasting Agents	Effective 7/30/99
Part 56.	Storage and Handling of Liquefied Petroleum Gases	Draft at LSB for informal review
Part 62.	Elastics	Public Hearings August 17 & 19
Part 73.	Fire Brigades	Draft at LSB for informal review
Part 90.	Permit-Required Confined Spaces (PRCS)	LSB formal certification
Part 91.	Process Safety Management of Highly Hazardous Chemicals (PSM)	LSB formal certification

Construction

Part 6.	Personal Protective Equipment	Effective 7/30/99
Part 13.	Material Handling	Effective 7/30/99
Part 26.	Steel and Precast Erection	At Advisory Committee
Part 31.	Diving Operations	At Advisory Committee
Part 91.	Process Safety Management of Highly Hazardous Chemicals	LSB formal certification

Occupational Health Standards

General Industry

Acrylonitrile	RFR approved
1,3-Butadiene	Published Michigan Register 4/30/99
Cadmium	Effective 4/21/99
Coke Oven Emissions	Published Michigan Register 4/30/99
Ethylene Oxide	Draft at LSB for informal review
Formaldehyde	Published Michigan Register 4/30/99
Hazardous Waste Operations and Emergency Response (HAZWOPER)	Draft at LSB for informal review
Inorganic Arsenic	Draft at LSB for informal review
Methylene Chloride	At ORR for Governor approval
Methylenedianiline	LSB formal certification
Permit-Required Confined Spaces (PRCS)	LSB formal certification
Personal Protective Equipment	Effective 4/21/99
Process Safety Management of Highly Hazardous Chemicals (PSM)	LSB formal certification
Vinyl Chloride	Draft at LSB for informal review

Construction

Asbestos	Published Michigan Register 4/30/99
Lead	Published Michigan Register 5/31/99

JCAR = Joint Committee on Administrative Rules

LSB = Legislative Services Bureau

ORR = Office of Regulatory Reform

RFR = Request for Rulemaking

The MIOSHA Standards Division assists in the promulgation of Michigan occupational safety and health standards. To receive a copy of the MIOSHA Standards Index (updated April 1999) or for single copies and sets of safety and health standards, please contact the Standards Division at 517.322.1845.

BSR Education & Training Calendar

Date	Course Location	Contact MIOSHA Trainer	Phone
August			
2	When MIOSHA Visits Southfield	Pat Murphy Linda Long	248.353.4500
5	Lockout/Tagout & Confined Space Entry Roseville	Staff Bernard Sznaider	810.445.5480
10	Lockout/Tagout & Confined Space Entry Howell	Janie Willsmore Karen Odell	517.546.3920
10	Hazard Communication & Lift Truck Cadillac	Cindy Swiler Jerry Medler	231.775.2458
18	Evaluating & Implementing a Safety Program Shelby Township	Reid Sheeley Lee Kueppers	810.752.2091
19	Machine Guarding Sault Ste. Marie	Sherri Pavloski Jerry Medler	906.635.2802
19	Mechanical Power Press Safety Port Huron	Julie Bernard Sznaider	810.989.5740
26	Recordkeeping-Accident Investigation Clarkston	Christy Winter Richard Zdeb	248.620.2534
September			
8 & 9	Mechanical Power Press Safety Southfield	Ed Ratzenberger Linda Long	248.557.7010
10	Elements of A Safety Program Clinton Township	Susan Verellen Suellen Cook	810.263.2886
13	Supervisor's Role In Safety Southfield	Andy Carr Richard Zdeb	248.353.4500
14	Supervisor's Role In Safety Sault Ste. Marie	Sherri Pavloski Jerry Medler	906.635.2802
14-16	Safety & Health Administrator Course Clarkston	Christy Winter Richard Zdeb	248.620.2534
16	Industrial Ergonomics/Hand & Finger Safety Garden City	Karen Dalton Linda Long	734.458.3923
16	MIOSHA Recordkeeping Seminar Canton	Jacqueline Schank Suellen Cook	734.464.9964
16	Mechanical Power Press Safety Roseville	Staff Bernard Sznaider	810.445.5480
19	Hazard Communication Workshop Jackson	Tom Nichols Gregg Grubb	517.782.8268
21	Supervisor's Role in Safety Cadillac	Cindy Swiler Jerry Medler	231.775.2458
28	Lockout/Tagout & Confined Space Review & Interactive Workshop-Detroit	Pat Murphy Linda Long	248.353.4500

Variations

Published July 30, 1999

Following are requests for variances and variances granted from occupational safety standards in accordance with rules of the Department of Consumer & Industry Services, Part 12, Variances (R408.22201 to 408.22251).

Variances Requested

Part number and rule number from which variance is requested

Part 8 - Material Handling. Rule R408.40833, Rule 833(1)

Summary of employer's request for variance

To allow employer to tandem lift structural steel members under controlled conditions and with stipulations.

Name and address of employer

Abray Steel Erectors, Inc.

Location for which variance is requested

St. Fabian Parish, Farmington Hills
Sunrise Assisted Living Building, Northville

Karotech Office Building, Commerce Twp.
Riverbend Project, Clinton Township
Sunrise Assisted Living, Ann Arbor

Name and address of employer

American Erectors, Inc

Location for which variance is requested

Northfield West - Great Lakes Gas Building, Troy

Name and address of employer

Broad, Vogt & Conant, Inc

Location for which variance is requested

General Motors - Michigan Assembly Plant, Flint

Name and address of employer

Douglas Steel Erection Company

Location for which variance is requested

Ford ADIM, Dearborn

Troy Office Center II, Building E., Troy
Michigan State University, Bio-Physical Sciences Bldg., East Lansing

William Beaumont Hospital, Rose Cancer Center, Royal Oak

Name and address of employer

General Steel Erection, Inc

Location for which variance is requested

Troy Physician Project, Troy

Name and address of employer

Havens National Riggers & Erectors

Location for which variance is requested

Great Lakes Steel/Cold Galvanizing Line

Project #1/Hazama Corp., Ecorse

Name and address of employer

Ideal Steel & Builders' Supplies, Inc.

Location for which variance is requested

Tiger Stadium, Detroit

Name and address of employer

Johnson Steel Fabrication, Inc

Location for which variance is requested

GM L6 Engine Facility, BP 304 Trestle, Flint

Name and address of employer

Kokosing Construction Company, Inc.

Location for which variance is requested

Michigan International Speedway, Brooklyn

Name and address of employer

McGuire Steel Erection, Inc.

Location for which variance is requested

Oakland Commons, Southfield
Sterling Heights Performing Arts Center, Sterling Heights
Mill Creek Middle School, Dexter
Cheyenne Elementary School, Macomb Twp.

Gratiot Hospital, Alma

Thermofil Mezzanine, Fowlerville

St. Mary's Hospital, Saginaw

Viking Ice Arena, Hazel Park

St. Mary Catholic Church, Wayne

Franklin Pointe Office Bldg., Bloomfield Hills

Michigan Army National Guard, Battle Creek

Lansing State Journal-USA Today

EMU- Health & Human Services Bldg., Ypsilanti

Munn Ice Arena (at MSU), East Lansing

Life of Faith Fellowship Church, Port Huron

Name and address of employer

Midwest Steel, Inc.

Location for which variance is requested

Daimler Chrysler IS expansion project, Auburn Hills

Name and address of employer

R & B Steel Company

Location for which variance is requested

Clinton County Courthouse, St. Johns

Name and address of employer

Sova Steel, Inc.

Location for which variance is requested

Detroit Tiger Stadium, Detroit

Macomb Community College, Warren

Ford Motor Company Town Center, Dearborn

Name and address of employer

Vulcan Iron Works

Location for which variance is requested

Ford Motor Company, Dearborn Engine Plant Addition, Dearborn

Name and address of employer

Whitmore Steel

Location for which variance is requested

Tiger Stadium, Detroit

Part number and rule number from which variance is requested

Part 10 - Lifting and Digging Equipment. Rule R408.41015a (2) (d)(g) (3) (4)

Summary of employer's request for variance

To allow employer to utilize an unguarded work platform suspended under a bridge deck by two cranes in accordance with certain stipulations.

Name and address of employer

Anlaan Corporation

Location for which variance is requested

M-6/I-96 Interchange, Ramp B, Kent County

Part number and rule number from which variance is requested

Part 10 - Lifting and Digging Equipment. Rule R408.41018a(16) & Rule R408.41020a(5)

Summary of employer's request for variance

To allow the employer to utilize rotation resistant cable to raise and lower work platform and to allow the derrick hoist machine base to be anchored at the two rear corners to deadmen in lieu of all four corners, provided stipulations are adhered to.

Name and address of employer

CB&I Constructors, Inc.

Location for which variance is requested

1,500,000 gallon Waterspheroid, Wixom

Part number and rule number from which variance is requested

Part 10 - Lifting and Digging Equipment. Rule R408.41015a (2)(g)(h)(i) & R408.41018a (12) & (16)

Summary of employer's request for variance

To allow the use of a work platform con-

Cont. on Page 14

Variations

Published July 30, 1999

Cont. from Page 13

taining a stripping scaffold mounted on the boom of a P & H Omega 40 ton hydraulic crane provided all of the requirements of Construction Safety Standard, Part 10. Lifting & Digging Equipment except rule 1015a (2)(g)(h)(i) and 1018a (12) & (16).

Name and address of employer

S. E. Johnson Companies

Location for which variance is requested

Blue Water Bridge, Port Huron

Part number and rule number from which variance is requested

Part 10 - Lifting and Digging Equipment. Rule R408.41015a(3) (4) & R408.41018a(21)

Summary of employer's request for variance

To allow the use of a work platform suspended from the load line of a crane to transport employees to scaffold platforms to perform welding during stack construction.

Name and address of employer

Monarch Welding & Engineering, Inc

Location for which variance is requested

Central Wayne County Energy Recovery Project, Dearborn

Part number and rule number from which variance is requested

Part 10 - Lifting and Digging Equipment. Rule R408.41015a (2)(g)(h)(i) & R408.41018a (12)

Summary of employer's request for variance

To allow the use of work platform containing a stripping platform mounted on the boom of a P & H Omega 40 ton hydraulic crane to heights of up to 70 feet provided all of the requirements of Construction Safety Standard, Part 10. Lifting and Digging Equipment except Rule 1015a(2)(g)(h)(i) and 1018a(12) are met.

Name and address of employer

Walter Toebe Construction Company

Location for which variance is requested

I-275 Reconstruction Job in Wayne/Oakland County - MDOT Project

Part number and rule number from which variance is requested

Part 12 - Scaffolds and Scaffold Platforms R408.41221, Rule 1221(1)(c)

Summary of employer's request for variance

To allow employer to use stilts at a maximum height of 24 inches under controlled conditions and according to certain stipulations.

Name and address of employer

Ritsema Associates

Location for which variance is requested

Bronson Hospital Project, Kalamazoo

Name and address of employer

Stanton Interiors, Inc

Location for which variance is requested

Bronson Methodist Hospital - South Campus Development, Kalamazoo

Part number and rule number from which variance is requested

Part 20 - Demolition. Rule R408.42034, Rule 2034(2)

Summary of employer's request for variance

To allow employer to drop demolition debris in a secured, closed area of the building without a material chute under controlled conditions and according to certain stipulations.

Name and address of employer

SCS Group

Location for which variance is requested

Board of Water & Light Power Plant, Lansing

Variations Granted

Part number and rule number from which variance is requested

Part 8 - Material Handling. Rule R408.40820, Rule 820(4).

Summary of employer's request for variance

To allow employer to mechanically stack lagging material to approximately 14 feet.

Name and address of employer

Ric-Man Construction, Inc.

Location for which variance is requested

Downriver Regional Storage & Transport System, Taylor

Part number and rule number from which variance is requested

Part 8 - Material Handling. Rule R408.40833, Rule 833(1)

Summary of employer's request for variance

To allow employer to tandem lift structural

steel members under controlled conditions and with stipulations.

Name and address of employer

J. S. Alberici Construction Co., Inc.

Location for which variance is requested

Central Wayne Energy Recovery Project, Dearborn Heights

Name and address of employer

American Erectors, Inc

Location for which variance is requested

Kellogg Building, University of Michigan, Ann Arbor

Name and address of employer

Assemblers, Inc.

Location for which variance is requested

Troy Corporate Center, Troy

Name and address of employer

Bristol Steel & Conveyor Corp.

Location for which variance is requested

L6 Engine Facility, Flint

Name and address of employer

Douglas Steel Erection Company

Location for which variance is requested

Legislative Office Building, Lansing

Columbia Center Tower B, Troy

William Beaumont Hospital, Ambulatory Care Center, Troy

Name and address of employer

Havens Steel Company

Location for which variance is requested

Tiger Stadium, Detroit

Name and address of employer

Matheny Steel Erectors, Inc.

Location for which variance is requested

MTA Mass Transportation Bldg., Flint

Name and address of employer

McGuire Steel Erection, Inc.

Location for which variance is requested

Rochester New High School, Rochester

West Bloomfield Library, West Bloomfield

Westwinds Community Church, Jackson

Townsend Hotel Addition, Birmingham

Orchards Corporate Center - Bldg. 1 and Bldg. 2, Farmington

The Skating Center, Rochester

Northfield Crossing, Troy

G M L6 Engine Facility, Flint

Name and address of employer

Midwest Steel, Inc.

Location for which variance is requested

Ford Motor Company, Dearborn

GM-UAW Training Center, Detroit

Name and address of employer

Pioneer, Inc

Location for which variance is requested

Van Andel Institute, Grand Rapids

Asbestos

Cont. from Page 4

ers, building inspectors, or management planners must submit proof that they have attended and successfully completed their respective training courses. Asbestos inspectors, management planners, and project designers must also satisfy asbestos-related work experience requirements to become accredited to work in the state.

2) Approval of Asbestos Training

In order for individuals performing asbestos-related work to become accredited, they must successfully complete a designated training course that is recognized or approved by the Asbestos Program. Michigan course sponsors for asbestos abatement worker, contractor/supervisor, project designer, inspector and management planner courses must submit an application and other specified materials to the Asbestos Program and receive approval before the course may be taught in Michigan. Specifically, course sponsors must submit all course materials, instructor's credentials, and a completed application form with the appropriate fee. Upon determination that a course sponsor has satisfied Michigan's minimum requirements, it is approved to provide asbestos-related training within the state of Michigan.

3) Licensing of Asbestos Abatement Contractors

Other than specified exempt licensed trade groups (i.e., electricians, mechanical contractors, plumbers, residential builders, or residential maintenance/alteration contractors), any individual or company within Michigan that is hired to remove or encapsulate friable asbestos on the premises of another, must be licensed by the Asbestos Program before engaging in any asbestos abatement activities. To become licensed, a contractor must have workers' compensation insurance and proof that all workers and supervisors have been accredited before receiving their annual licenses. The designated exempt licensed trade groups are allowed to remove or encapsulate friable asbestos materials without obtaining an asbestos abatement contractor's license provided the job they are performing is incidental to their primary license trade and it does not exceed 260 linear feet or 160 square feet of friable asbestos-containing materials.

4) Processing of Asbestos Abatement Project Notifications

Contractors performing friable asbestos removal or encapsulation work must provide project notifications indicating the start-up/ending dates and other job-related information to the Asbestos Program within a specified time frame. The Asbestos Program requires project notification 10 days prior to any non-emergency asbestos abatement project exceeding 10 linear feet or 15 square feet, or both, of friable asbestos materials.

Emergency asbestos abatement projects must provide notification (phone, fax or mail) prior to starting the projects. Initial phone and fax notifications must be followed up by submitting the original written project notification and fee.

5) AHERA Management Plan

The Asbestos Hazardous Emergency Response Act (AHERA) of 1986 is an act mandated by Congress and administered by the U.S. Environmental Protection Agency (EPA). This act mandates inspections and written management plans for friable and non-friable asbestos-containing building materials for kindergarten through 12th grade private and public nonprofit schools. The Asbestos Program is the state agency which was selected by the governor to review the school's management plans and determine their compliance with AHERA. This process has involved the review of more than 5,000 individual plans.

6) Compliance Investigations

The Asbestos Program conducts on-site evaluation of the abatement activities of contractors and also responds to complaints or referrals involving improper practices or procedures during asbestos abatement activities.

What regulations are enforced?

The program enforces: Michigan Public Act 135 "Asbestos Abatement Contractors Licensing Act," Michigan Public Act 440 "Asbestos Workers Accreditation Act," OSHA 29 CFR 1926.1101 "Asbestos Standard for Construction," and OSHA 29 CFR 1910.1001 "Asbestos Standard for General Industry."

In addition, the Asbestos Program evaluates compliance with 40 CFR 763, the "Asbestos Hazard Emergency Response Act" and 40 CFR Subpart M, the "National Emission Standard for Hazardous Air Pollutants." When violations are identified, they are referred to the EPA or Michigan's

Department of Environmental Quality's Air Quality Division (DEQ) as appropriate.

What were the amendments to Public Acts 135 & 440 in 1998?

On June 24, 1998, the state of Michigan enacted Public Acts 894, 895, and 896. These acts amended Act 135 of 1986 and Act 440 of 1988. They redefined "department" (formerly the Department of Public Health) as the Department of Consumer and Industry Services; removed the June 1998, sunsets written into Act 135 and Act 440; required training course sponsors under Act 440 to include a student's social security number on the numbered certificate of course completion for more accurate identification; and aligned the accreditation and training course sponsor window periods in Act 440 with the asbestos abatement contractor licensing window renewal period.

The concept of "window period" was first implemented in Act 135 for asbestos abatement contractors. The "window period" (...renew no sooner than 90 days before the license expires and not later than 30 days before the license expires) was established to allow a licensed asbestos abatement company ample time to renew and thus, minimize the possibility of a contractor working under a lapsed license. This amendment to Act 440 allows time for the correction of deficiencies in accreditation and training renewal applications, thus, potentially eliminating abatement workers and training providers from inadvertently performing asbestos-related activities without licensure, which could subject them to stiff penalties.

This approach establishes consistency among the three disciplines: accreditation of individuals, approval of asbestos training course sponsors, and licensure of asbestos abatement contractors. It also minimizes confusion in Michigan's asbestos licensing community; ensures that the asbestos industry as a whole operates smoothly; and lessens the odds that someone may be allowed to work in any classification or discipline of the asbestos industry without proper licensure.

Who to Contact

For more information, copies of rules and regulations, worker accreditation application forms, project notification forms, lists of asbestos training courses in Michigan, or lists of licensed asbestos abatement contractors, please contact the **Asbestos Program** at **517.322.1320**. ■

Heat Stress

Cont. from Page 4

salt or both. The worker still sweats but experiences extreme giddiness, nausea, or headache. The skin is clammy and moist, the complexion pale or flushed.

Heat cramps, painful spasms of the muscles, are caused when workers quickly drink large quantities of water or an electrolyte solution (sports drink) during or immediately after performing work in the heat.

Fainting and **heat rash** can also be caused by the worker's body being unable to handle the heat imposed by the environment and the intensity of work being performed.

While there are no specific regulations regarding how hot the work environment can be, there is within MIOSHA the General Duty Clause, which requires that the employer "must provide a workplace free from recognized hazards." Where workers exposed to heat are: (1) demonstrably ill, and (2) this could be verified by a healthcare professional, and (3) the employer does nothing to alleviate these conditions, an investigation by an Industrial Hygienist from MIOSHA's Occupational Health Division could result in a General Duty violation being written.

What can employers and employees do to prevent heat related illness?

A variety of engineering controls including general ventilation may be helpful. Shielding workers from radiant heat sources, providing cooling fans, modifying equipment, using power tools to reduce manual labor, personal cooling devices, and personal protective equipment are all ways to reduce the hazards of heat exposure.

Work practices such as providing plenty of drinking water (as much as a quart per worker per hour) at the workplace can help reduce the risk of heat disorders. Glasses of ice chips, "sports drinks" to replace potassium, calcium and magnesium salts and more frequent rest periods in cool areas are all effective in reducing heat stress. Workers should if possible wear loose-fitting, light-colored, porous clothing which allows free air circulation over the body.

Educating workers, management, and first aid providers on recognizing symptoms of heat-related illness, how to report these symptoms to the employer, and methods for reducing the effects are a part of a comprehensive health and safety program.

For assistance in coping with working in Michigan summers contact the **Occupational Health Division of MIOSHA at 517.322.1608.** ■

How To Contact Us

MIOSHA Complaint Hotline	800.866.4675
Fatality/Catastrophe Hotline	800.858.0397
General Information	517.322.1814
Free Safety Consultation	517.322.1809
Free Health Consultation	517.322.6690

Website: www.cis.state.mi.us/bsr

Consumer & Industry Services
Bureau of Safety & Regulation
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Consumer & Industry Services
Bureau of Safety & Regulation
Director: Douglas R. Earle

MIOSHA News is a quarterly publication of the Bureau of Safety & Regulation, which is responsible for the enforcement of the Michigan Occupational Safety and Health Act (MIOSHA).

The purpose is to educate Michigan employers and employees about workplace safety and health. This document is in the public domain and we encourage reprinting.

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