

PROGRAM-RELATED FATALITIES

MICHIGAN 2012



Management Information Systems Section
Management and Technical Services Division
Michigan Department of Licensing & Regulatory Affairs
April 2013

CONTENTS

	Page
INTRODUCTION	4
HIGHLIGHTS OF PROGRAM-RELATED FATALITIES, MICHIGAN 2012	5
NOTE ON PROGRAM-RELATED CASES	8
CHARTS	
1. Program-Related Fatality Trends, Michigan, 1988-2012	9
TABLES	
1. Program-Related Fatality Trends, Michigan 1988-2012	10
2. Program-Related Fatalities by Industry Groups, Michigan 2012	11
3. Program-Related Fatalities by Occupation, Michigan 2012	12
4. Program-Related Fatalities by Age, Michigan 2012	13
5. Program-Related Fatalities by Gender, Michigan 2012	13
6. Program-Related Fatalities by Month of Occurrence, Michigan 2012	14
7. Program-Related Fatalities by Industry Groups and Day of the Week, Michigan 2012	15
8. Program-Related Fatalities by County of Occurrence, Michigan 2012	16

CONTENTS (CONT)

PROGRAM-RELATED FATALITY INCIDENTS BRIEF DESCRIPTIONS OF CASES BY INDUSTRY GROUPS	17
Agriculture, Forestry, Fishing and Hunting	17
Utilities	17
Construction	17
Manufacturing	19
Wholesale Trade	20
Retail Trade	20
Transportation and Warehousing	20
Administrative and Support and Waste Management and Remediation Services	21
Public Administration	21

INTRODUCTION

In 2012, Michigan reported 26 Program-Related fatalities. Program-Related fatalities in Michigan are recorded and tabulated by the Management Information Systems Section (MISS), Michigan Occupational Safety and Health Administration (MIOSHA), Michigan Department of Licensing and Regulatory Affairs (LARA). The sources of data include the Basic Report of Injury – Form 100 and telephone reports of fatalities to MIOSHA. The conditions necessary for a fatal case to be Program-Related are defined in the NOTE ON PROGRAM RELATED CASES (see Page 8).

The intention of this report is to promote an understanding of what constitutes a Program-Related fatality and to assist in the continued effort of preventing and reducing fatal cases. Information presented in this report may be of special interest to employers, employees, safety professionals and consultants. Any inquiries regarding this report may be addressed to:

**Management Information Systems Section
Management and Technical Services Division
Michigan Occupational Safety and Health Administration (MIOSHA)
Michigan Department of Licensing & Regulatory Affairs
7150 Harris Drive, Box 30643
Lansing, Michigan 48909-8143
Telephone (517) 322-1851**

HIGHLIGHTS OF PROGRAM-RELATED FATALITIES, MICHIGAN 2012

This Program-Related fatality information for Michigan was compiled from the "Employers Basic Report of Injury," Workers Disability Form 100s, and from direct telephone reports of fatalities to MIOSHA. Only fatal cases that are Program-Related, as defined by MIOSHA, are compiled. Therefore, the data does not include fatalities resulting from heart attacks, homicides, suicides, personal motor vehicle accidents, and aircraft accidents. The figures are shown in **Tables 1 through 8**.

PROGRAM-RELATED FATALITY TRENDS

A definition of Program-Related cases can be found on Page 8 of this report. Program-Related fatality trends for 1988 through 2012 are shown in **Table 1**, as well as data from 1988 through 2012 in **Chart 1**.

This report is an overview of how the fatalities were distributed across industry groups and occupations. Frequencies of fatalities by age group, gender, month of occurrence, and counties of occurrence are also provided.

PROGRAM-RELATED FATALITIES BY INDUSTRY

Table 2 shows the distribution of Program-Related fatalities by industry groups in 2012. This was determined by the job being performed by the employee at the time of the accident. Beginning in 2003, the industry group category is based on the Northern American Industry Classification System (NAICS), which groups establishments into industries based on the activities in which they are primarily engaged. Prior to 2003, the industry group category was based on the Standard Industrial Classification (SIC) of the employer. Due to the substantial differences between the current and previous classification system, the results by industry in 2003 and thereafter constitute a break in series and users are advised against making comparisons between the 2003 industry categories and the results for previous years.

During 2012, the largest number of Program-Related fatalities was reported in the Construction industry (NAICS 23) with 9 fatalities. Manufacturing (NAICS 31-33) had the second highest number with six. This was followed by Agriculture, Forestry, Fishing and Hunting (NAICS 11) and Administrative and Support and Waste Management and Remediation Services (NAICS 56) which each reported three fatalities.

PROGRAM-RELATED FATALITIES BY OCCUPATION

Program-Related fatalities by occupation are shown in **Table 3**. The most affected occupation group with eight program-related fatalities was Construction and Extraction. This was followed by Building and Grounds Cleaning and Maintenance with five fatalities and Transportation and Material Moving reported four fatalities.

PROGRAM-RELATED FATALITIES BY AGE AND GENDER

The distribution of Program-Related fatalities by age and gender are shown in **Tables 4 and 5**. The age groups of 26-30 reported six fatalities, the highest number during 2012. This was followed by the age category of 61 and over reporting five fatalities. Of the 26 victims, 25 were male employees.

PROGRAM-RELATED FATALITIES BY MONTH OF OCCURRENCE

Fatality data categorized by the month of occurrence is shown in **Table 6**. The month of June recorded the highest number of program-related fatalities with six. Three each were reported for the months of July, October, November and December. The months of April and September each did not record any reported fatalities.

PROGRAM-RELATED FATALITIES BY INDUSTRY GROUPS AND DAYS OF THE WEEK

Program-Related fatalities by industry groups and days of the week are shown in **Table 7**. The highest number of fatalities by day of the week shows Monday, Wednesday, Thursday and Friday each with five, followed by Tuesday with four fatalities.

PROGRAM-RELATED FATALITIES BY COUNTY OF OCCURRENCE

The distribution of fatality cases by counties shows that Program-Related fatalities were reported as occurring in 17 counties during 2012. Four fatalities each were reported in Oakland and Wayne counties, three in Macomb County, and two were reported in Kent County. Sixty-six Michigan counties had no program-related fatalities. A complete distribution of fatality cases by county of occurrence is shown in **Table 8**.

Even though Michigan's 2012 total Program-Related fatality cases are far less than the thousands of cases reported nationwide, the consequences of these on-the-job deaths in terms of human suffering, lost workdays, decreased production, and increased compensation rates are all too significant to be overlooked.

In order for Michigan to reduce the number of on-the-job fatality cases, it requires a conscious effort on the part of employers to recognize and comply with MIOSHA standards, develop and implement safe working procedures and assure that employees observe and practice these procedures. The MIOSHA program offers onsite consultation, and consultation, education and training (CET) opportunities to employers and employees alike to help them achieve this goal.

Those Michigan employers, who would like to request education and training services, as well as onsite consultation programs, may contact:

Consultation Education and Training (CET) Division
Michigan Occupational Safety and Health Administration (MIOSHA)
Michigan Department of Licensing & Regulatory Affairs
7150 Harris Drive, Box 30643, Lansing, Michigan 48909
Telephone (517) 322-1809

The Program-Related fatality data for Michigan are presented in the following series of **Tables 1 through 8**. A brief description of how the Program-Related fatalities occurred is also provided following the series of tables. The descriptions are listed by industry groups based on the North American Industry Classification System (NAICS), which is based on the activity in which the establishment is primarily engaged. Safety professionals may find this information useful for accident prevention.

NOTE ON PROGRAM-RELATED CASES

A fatality is recorded as “Program-Related” if the deceased party was employed in an occupation included in MIOSHA jurisdiction as defined in Public Act 154 of 1974, as amended, and the fatality appears to be related to one or more of the following conditions:

1. The incident was found to have resulted from violations of MIOSHA safety and health standards or the “general duty” clause.
2. The incident was considered to be the result of a failure to follow a good safety and health practice that would be the subject of a safety and health recommendation.
3. The information describing the incident is insufficient to make a clear distinction between a "Program-Related" and "non-Program-Related" incident, but the type and nature of the injury indicates that there is a high probability that the injury was the result of a failure to adhere to one or more MIOSHA standards, the “general duty” clause, or good safety and health practice.

Any inquiries may be addressed to:

**Management Information Systems Section
Management and Technical Services Division
Michigan Occupational Safety and Health Administration (MIOSHA)
Michigan Department of Licensing & Regulatory Affairs
7150 Harris Drive, Box 30643
Lansing, Michigan 48909-8143
(517) 322-1851**

**CHART 1
PROGRAM-RELATED FATALITY TRENDS
MICHIGAN 1988-2012**

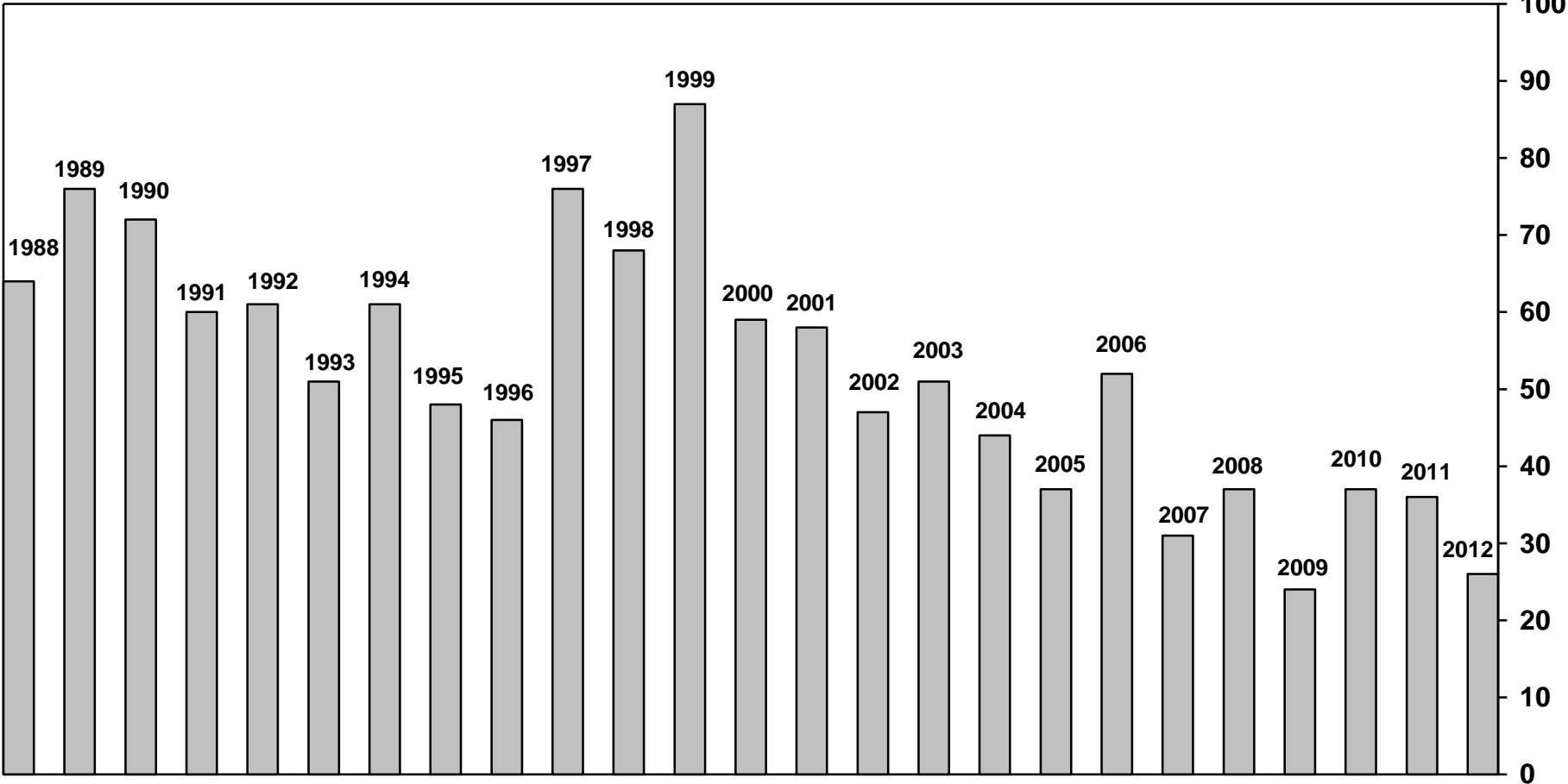


TABLE 1
PROGRAM-RELATED FATALITY TRENDS
MICHIGAN 1987 – 2012

YEAR	NUMBER	PERCENT CHANGE FROM PREVIOUS YEAR	PERCENT CHANGE FROM 1987
1987	73	--	---
1988	64	-12.3	-12.3
1989	76	18.8	4.1
1990	72	-5.3	-1.4
1991	60	-16.7	-17.8
1992	61	1.7	-16.4
1993	51	-16.4	-30.1
1994	61	19.6	-16.4
1995	48	-21.3	-34.2
1996	46	-4.2	-37.0
1997	76	65.2	4.1
1998	68	-10.5	-6.8
1999	87	27.9	19.2
2000	59	-32.2	-19.2
2001	58	-1.7	-20.5
2002	47	-19.0	-35.6
2003	51	8.5	-30.1
2004	44	-13.7	-39.7
2005	37*	-15.9	-49.3
2006	52	40.5	-28.8
2007	31	-40.4	-57.5
2008	37	19.4	-49.4
2009	24	-35.2	-67.2
2010	38*	58.3	-48.0
2011	36	-5.3	-50.7
2012	26	-27.8	-64.4

Source: MISS/MTSD/ MIOSHA/Michigan Department of Licensing & Regulatory Affairs

Note: An amendment has been made to both the 2005 and 2010 fatality counts. They were previously reported as 36 and 37 total fatalities respectively.

TABLE 2
PROGRAM-RELATED FATALITIES
BY INDUSTRY GROUPS
MICHIGAN 2012

NAICS MAJOR SECTOR	INDUSTRY GROUP	TOTAL
11	AGRICULTURE, FORESTRY, FISHING AND HUNTING	3
21	MINING	0
22	UTILITIES	1
23	CONSTRUCTION	9
31-33	MANUFACTURING	6
42	WHOLESALE TRADE	1
44-45	RETAIL TRADE	1
48-49	TRANSPORTATION AND WAREHOUSING	1
51	INFORMATION	0
52	FINANCE AND INSURANCE	0
53	REAL ESTATE AND RENTAL AND LEASING	0
54	PROFESSIONAL, SCIENTIFIC AND TECHNICAL SERVICES	0
55	MANAGEMENT OF COMPANIES AND ENTERPRISES	0
56	ADMINISTRATIVE AND SUPPORT AND WASTE MANAGEMENT AND REMEDIATION SERVICES	3
61	EDUCATIONAL SERVICES	0
62	HEALTH CARE AND SOCIAL ASSISTANCE	0
71	ARTS, ENTERTAINMENT AND RECREATION	0
72	ACCOMMODATION AND FOOD SERVICES	0
81	OTHER SERVICES (EXCEPT PUBLIC ADMINISTRATION)	0
92	PUBLIC ADMINISTRATION	1
TOTAL		26

Note: The industry group categories are based on the Northern American Industrial Classification System (NAICS), which is based on the activities in which the establishments are primarily engaged.

Source: MISS/MTSD/ MIOSHA/Michigan Department of Licensing & Regulatory Affairs

TABLE 3
PROGRAM-RELATED FATALITIES
BY OCCUPATION
MICHIGAN 2012

STANDARD OCCUPATION CODE	OCCUPATION	NUMBER OF CASES
11-0000	MANAGEMENT OCCUPATIONS	2
13-0000	BUSINESS AND FINANCIAL OPERATIONS	0
15-0000	COMPUTER AND MATHEMATICAL	0
17-0000	ARCHITECTURE AND ENGINEERING	2
19-0000	LIFE, PHYSICAL AND SOCIAL SCIENCE	0
21-0000	COMMUNITY AND SOCIAL SERVICE	0
23-0000	LEGAL OCCUPATIONS	0
25-0000	EDUCATION, TRAINING AND LIBRARY	0
27-0000	ARTS, DESIGN, ENTERTAINMENT, SPORTS AND MEDIA	0
29-0000	HEALTHCARE PRACTITIONERS AND TECHNICAL	0
31-0000	HEALTHCARE SUPPORT	0
33-0000	PROTECTIVE SERVICE	0
35-0000	FOOD PREPARATION AND SERVING RELATED	0
37-0000	BUILDING AND GROUNDS CLEANING AND MAINTENANCE	5
39-0000	PERSONAL CARE AND SERVICE	0
41-0000	SALES AND RELATED	0
43-0000	OFFICE AND ADMINISTRATIVE SUPPORT	0
45-0000	FARMING, FISHING AND FORESTRY	0
47-0000	CONSTRUCTION AND EXTRACTION	8
49-0000	INSTALLATION, MAINTENANCE AND REPAIR	2
51-0000	PRODUCTION OCCUPATIONS	3
53-0000	TRANSPORTATION AND MATERIAL MOVING	4
55-0000	MILITARY SPECIFIC OCCUPATIONS	0
TOTAL		26

Note: Occupations are based on the Standard Occupational Classification (SOC) coding manual.

Source: MISS/MTSD/MIOSHA/Michigan Department of Licensing & Regulatory Affairs

TABLE 4
PROGRAM-RELATED FATALITIES BY AGE
MICHIGAN 2012

AGE	NUMBER OF CASES	PERCENT OF CASES
20 and Under	0	0
21 - 25	1	4
26 - 30	6	23
31 - 35	2	8
36 - 40	4	15
41 - 45	1	4
46 - 50	4	15
51 - 55	1	4
56 - 60	2	8
61 and Over	5	19
TOTAL	26	100

Source: MISS/MTSD/MIOSHA/Michigan Department of Licensing & Regulatory Affairs

TABLE 5
PROGRAM-RELATED FATALITIES BY GENDER
MICHIGAN 2012

GENDER	NUMBER OF CASES	PERCENT OF CASES
MALE	25	96
FEMALE	1	4
TOTAL	26	100

Source: MISS/MTSD/MIOSHA/Michigan Department of Licensing & Regulatory Affairs

TABLE 6

**PROGRAM-RELATED FATALITIES
BY MONTH OF OCCURRENCE
MICHIGAN 2012**

MONTH OF OCCURRENCE	NUMBER OF CASES
JANUARY	2
FEBRUARY	1
MARCH	2
APRIL	0
MAY	1
JUNE	6
JULY	3
AUGUST	2
SEPTEMBER	0
OCTOBER	3
NOVEMBER	3
DECEMBER	3
TOTAL	26

Source: MISS/MTSD/MIOSHA/Michigan Department of Licensing
& Regulatory Affairs

TABLE 7
PROGRAM-RELATED FATALITIES
BY INDUSTRY GROUPS AND DAY OF THE WEEK
MICHIGAN 2012

INDUSTRY GROUP	DAY OF THE WEEK							TOTAL
	SUN	MON	TUE	WED	THUR	FRI	SAT	
AGRICULTURE, FORESTY, FISHING & HUNTING	0	0	0	0	2	1	0	3
UTILITIES	0	0	0	0	0	1	0	1
CONSTRUCTION	0	2	1	1	2	2	1	9
MANUFACTURING	0	1	1	3	0	0	1	6
WHOLESALE TRADE	0	0	0	0	1	0	0	1
RETAIL TRADE	0	1	0	0	0	0	0	1
TRANSPORTATION & WAREHOUSING	0	0	0	1	0	0	0	1
ADMINISTRATIVE AND SUPPORT AND WASTE MANAGEMENT AND REMEDATION SERVICES	0	1	1	0	0	1	0	3
PUBLIC ADMINISTRATION	0	0	1	0	0	0	0	1
TOTAL	0	5	4	5	5	5	2	26

Source: MISS/MTSD/MIOSHA/Michigan Department of Licensing & Regulatory Affairs

TABLE 8
PROGRAM-RELATED FATALITIES BY
COUNTY OF OCCURRENCE
MICHIGAN 2012

COUNTY	NUMBER OF CASES
BERRIEN	1
GLADWIN	1
HILLSDALE	1
IONIA	1
JACKSON	1
KALAMAZOO	1
KALKASKA	1
KENT	2
LENAWEE	1
MACOMB	3
MUSKEGON	1
OAKLAND	4
PRESQUE ISLE	1
ST CLAIR	1
SCHOOLCRAFT	1
WASHTENAW	1
WAYNE	4
TOTALS	26

Source: MISS/MTSD/MIOSHA/Michigan Department
of Licensing & Regulatory Affairs

**PROGRAM-RELATED FATALITY INCIDENTS
BRIEF DESCRIPTIONS OF CASES BY INDUSTRY GROUPS**

AGRICULTURE, FORESTRY, FISHING AND HUNTING:

1. Employee was felling trees using a chainsaw. After cutting the first tree, it became lodged in a nearby tree. Employee cut a limb from the nearby tree trying to use one of its limbs to drop the first tree. Since it was unsuccessful, the employee returned to the first tree and began cutting. This released the limb from the second tree, striking him. Employee was found by co-owner.

Violations Noted: Logging

2. Two (2) employees were onsite a logging operation. One employee was felling trees and the other was assisting with limbing. The employee limbing trees was approximately 47-feet away when co-worker cut a tree approximately 90-foot tall. The tree fell the wrong way, striking and killing the co-worker.

Violations Noted: Logging

3. Employee was cutting strings on a bale of hay behind a large pile of silage. A co-worker was driving a pay loader in the area. He came around the pile of silage but did not see the co-worker. The front tire of the pay loader knocked the employee down, running over him.

Violations Noted: None

UTILITIES:

4. A utility crew had been dispatched during daylight hours to repair a downed power line on a rural road. The truck was parked facing the same direction as traffic flow and partially on the shoulder with emergency lights in operation. Employee exited the truck and proceeded to the rear to retrieve traffic control devices in preparation of establishing a safe work zone. A passing motorist struck the employee pushing him into the rear of the truck.

Violations Noted: None

CONSTRUCTION:

5. Employee fell through a roof they were in the process of replacing to the ground approximately 25-feet below.

**Violations Noted: General Rules
 Demolition**

6. Employee was electrocuted while using a medal ladder to move power lines.

Violations Noted: None

7. Employee extended a pipe into roadway and a bus struck the pipe propelling the employee into a crane's outrigger.

Violations Noted: None

8. Three (3) employees were engaged in relocating a scaffold suspended beneath bridge beams. The scaffolding was installed for repair and painting of a suspension bridge 140-feet above a river. One employee was removing the deck clips and the other two were staging the decking to be installed in another location. The employee that was removing the clips was securing the cable to the decking when the cable slid towards the center of the sheet and then contacted the other unclipped supporting cables. The caused the sheet to become vertical. The employee fell into the river. The manufacturer's procedures for moving the scaffolding were not being followed and the employee was not using a safety harness.

**Violations Noted: General Rules
 Personal Protective Equipment
 Scaffolds and Scaffold Platforms**

9. Two (2) employees were roofing a two-story building. They were putting up a 40-foot aluminum ladder to gain access to the roof so they could install a cap on the brick. They lost control of the ladder and it came in contact with overhead power lines. One employee was fatally electrocuted and the other received a nonfatal electric shock.

**Violations Noted: General Rules
 Fixed and Portable Ladders**

10. Employees were installing and securing a 20,000 gallon tank to be used for storage of water for fire protection in an 11-foot deep excavation. The excavation was not properly sloped, shored or supported. One employee was standing next to the tank when one side collapsed causing the tank to shift crushing the employee between the side of the excavation and the tank.

**Violations Noted: General Rules
 Excavation, Trenching and Shoring**

11. A plumber was drilling through a floor joist while standing on a 6-foot stepladder. He fell from the ladder and struck his head on the floor.

Violations Noted: None

12. Employee was struck by a vehicle while helping it back out of a driveway.

**Violations Noted: General Rules
 Reporting and Reporting of Occupational Injuries and Illnesses**

13. Surveying team had set up their traffic control devices for surveying operations and was evaluating traffic flow when an SUV that was merging onto the freeway was struck by a semi-truck. The SUV lost control and entered the work zone, striking an employee. The traffic control devices for this work operation were not in accordance with Part 6 – Michigan Manual of Uniform Traffic Control Devices for a work zone where merging expressway traffic takes place.

**Violations Noted: Recording and Reporting of Occupational Injuries and Illnesses
General Rules
Signals, Signs, Tags, and Barricades**

MANUFACTURING:

14. Two (2) employees were moving steel coils. One was operating an overhead crane and the other was operating the coil car. When the employee set the coils down on the coil car, one was unstable and fell off the coil car, landing on the employee.

Violations Noted: General Provisions

15. An employee accessed an unguarded area to clean debris from the belt of a conveyor and to adjust the belt while the conveyor was still running. The employee became caught in the running belt and idler roller.

Violations Noted: Conveyors

16. Employee was found in a plastic shredder/granulator, in which the hopper is fed by a conveyor system. Incident is being investigated as a possible homicide.

Violations Noted: None

17. Employee was operating a powered industrial truck outdoors, moving bales of material used in the paper-making process. The powered industrial truck tipped over when the employee turned without first lowering the load that exceeded the capacity. The employee was crushed between the ground and the power industrial truck.

**Violations Noted: Powered Industrial Trucks
Pulp, Paper and Paperboard Mills**

18. Employee requested help on an expansion molding machine. A co-worker came over and tried to remove the parts from the machine with the power on and the safety guard defeated. The machine cycled with the employee inside the confines of the mold.

Violations Noted: Plastic Molding

19. Employee was inside a robot work cell with interlocked gates closed when he was struck from behind by a transfer robot, crushing his chest and neck. Employee had the lockout attached to his belt loop.

Violations Noted: None

WHOLESALE TRADE:

20. A porter was refueling delivery trucks and placing shipping documents inside the rear door of semitrailers that contained empty beer kegs. The kegs are placed on the side four to a pallet and stacked four pallets high. The pallets are specifically designed to hold the kegs and the last two pallet stacks are shrink-wrapped to prevent them from falling when the doors are opened. Upon observing kegs on the ground, a coworker located the employee laying on the ground and unresponsive. He had injuries to the back of his head but because there were no witnesses, they were unable to determine how injuries occurred.

Violations Noted: None

RETAIL TRADE:

21. Employee was working alone in a field changing a tire on a manure spreader. He began filling the tire with air without placing it in a cage or on a vehicle. The tire exploded, striking the employee.

**Violations Noted: Automotive Service Operations
Recording and Reporting of Occupational Injuries and Illnesses**

TRANSPORTATION AND WAREHOUSING:

22. While adjusting the temperature on a digital thermostat, the employee reached inside a control panel and contacted 480-volt electrical parts and was electrocuted.

**Violations Noted: Personal Protective Equipment
Design Safety Standards for Electrical Systems
Electrical Safety Related Work Practices**

ADMINISTRATIVE AND SUPPORT AND WASTE MANAGEMENT AND REMEDIATION SERVICES:

23. Two employees were unhooking a heavy haul trailer and were attempting to lower the front of the trailer onto the cribbing. While lowering the hydraulic trailer, the truck driver heard a popping noise. As he walked around the gooseneck, he found his co-worker lying on the ground. The 20-lb. stop block had dislodged from its mount and struck him in the chin causing fatal injuries.

Violations Noted: General Provisions

24. The co-owner of a small tree removal company and an employee were delivering a load of firewood to a customer. After dumping the load, the bed of the truck would not completely lower so the driver pulled forward and then raised the bed again. While the co-owner was looking at the bed, it fell crushing him between the truck frame and dump bed.

**Violations Noted: General Provisions
Recording and Reporting of Occupational Injuries and Illnesses**

25. The deceased was limbing a tree in preparation of trimming it. He climbed using spurs and a saddle, tying off to a branch approximately 35-feet above the ground. The ropes were improperly secured to the branch and to the rear bumper of a car. An operator had been instructed to keep tension on the rope. As the cut was finished, the branch rolled toward the deceased and fell striking him causing fatal injuries.

**Violations Noted: Personal Protective Equipment
Tree Trimming and Removal
General Duty
Inspections and Investigations, Citations and Proposed Penalties
Hazard Communication**

PUBLIC ADMINISTRATION:

26. Employee was operating a dump truck used to spread asphalt at an intersection of three dirt roads. He had just completed a U-turn when the truck tipped over onto its side. Employee was not wearing a seatbelt. The truck bed had been raised 1 ½ to 2 feet and contained 7,000 to 10,000 pounds of material, which was within the capacity of the truck. The employee died from positional asphyxiation.

Violations Noted: None