

UTAH OSHA

DIRECTIVE NUMBER: 2014-002	EFFECTIVE DATE: November 1, 2014
SUBJECT: Local Emphasis Program for Amputations	

ABSTRACT

- Purpose:** This instruction establishes policies and strategies for a Local Emphasis Program (LEP) designed to identify and reduce workplace hazards which are causing or are likely to cause amputations.
- References:** Utah OSHA Field Operations Manual (UFOM).
- OSHA Instruction CPL 02-00-025, January 4, 1995, Scheduling System for Programmed Inspections.
- OSHA Instruction CPL 02-00-051, May 28, 1998, Enforcement Exemptions and Limitations under the Appropriations Act (Appendix A updated annually).
- OSHA Instruction CPL 04-00-001, November 10, 1999, Procedures for Approval of Local Emphasis Programs.
- OSHA Instruction CPL 03-00-003, October 27, 2006, National Emphasis Program on Amputations.
- Distribution:** Utah OSHA Staff; Region VIII Area Office; H-Drive Accessible; and Internet Accessible.
- Expiration:** This Directive expires October 31, 2019. EXCEPTION: Any inspection begun prior to this date may continue until its conclusion.
- Originating Office:** State of Utah, Labor Commission, Utah OSHA
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I. Goal:

Inadequate or improperly applied machine guarding techniques and inadequate control of associated energy during servicing and/or maintenance activities are the primary cause of amputations in general industry.

Injuries involving machinery and equipment often result in death or permanent disability. Utah OSHA's inspection history indicates that employee exposures to unguarded or inadequately guarded machinery and equipment, together with associated hazardous energy exposures during servicing and maintenance activities, occur in many workplaces. The operation of machinery and equipment can be extremely dangerous and compliance with Utah OSHA's machine guarding and hazardous energy control standards needs to be improved throughout industry.

The Utah OSHA Strategic Plan describes agency priorities, including reducing the number of amputation hazards. This instruction transmits policies and strategies for a Local Emphasis Program (LEP), which is designed to identify and reduce workplace hazards that cause or are likely to cause amputations.

The intent of the LEP is to target workplaces with machines that cause or are capable of causing amputations, as well as workplaces where amputations have occurred, in order to reduce amputation injuries while maximizing the agency's inspection resources. This LEP will enable Utah OSHA to review and analyze injury and illness records to determine whether amputations, avulsions, lacerations or other related injuries have occurred. This LEP also establishes a scheduling system for conducting safety and health inspections to address hazards associated with machine guarding.

II. Scope:

This Directive applies to general industry workplaces identified, where any machinery and equipment that are likely to cause amputations are present [See Appendix A (not inclusive) for guidance on the types of machinery and equipment most often associated with amputations].

III. Expiration:

This Directive expires on October 31, 2019, but may be renewed as necessary.

IV. Background:

The failure to properly apply machine guarding techniques and the failure to adequately control associated energy hazards during servicing and/or maintenance activities are the primary cause of amputations.

Utah Administrative Code (UAC) and 29 CFR 1910 (Subparts J, O, and P) provide for safety measures that need to be used for the safe operation, servicing and maintenance of

machinery and equipment. Machinery and equipment are covered by Utah OSHA standards such as, but not limited to:

- UAC R614-5-2. Conveyors.
- UAC R614-6-1. Crushing, Screening, and Grinding Equipment.
- UAC R614-6-9. Filters and Centrifuges.
- UAC R614-6-10. Food Processing.
- 29 CFR 1910.147 - The control of hazardous energy (lockout/tagout).
- 29 CFR 1910.212 - General requirements for all machines.
- 29 CFR 1910.213 - Woodworking machinery requirements.
- 29 CFR 1910.217 - Mechanical power presses.
- 29 CFR 1910.219 - Mechanical power-transmission apparatus.
- 29 CFR 1910.243 - Guarding of portable powered tools.

V. Action:

The Director or designee shall ensure that the procedures outlined in this Directive are followed during the effective period of this Directive. This Directive is not to conflict with inspection priorities as established in the Utah Field Operations Manual (UFOM).

When an inspection is not conducted because the employer has refused entry, a warrant shall be sought in accordance with the current procedures for handling such refusals.

VI. Selection and Scheduling of Sites for Inspection:

Inspections conducted under this local emphasis program shall be scheduled as follows:

- A. Using local government sources, telephone directories, trade manuals and other available sources, Utah OSHA will develop an inspection scheduling list of establishments that meet the requirements for inspection under this LEP. This list will be updated annually but may also be updated at any time as necessary.
- B. To help in developing the inspection scheduling list, Utah OSHA has identified industries, listed below, which typically have equipment and/or machinery that are known to cause serious injury, including amputations, and death. There may be other industries not listed below that fall under the scope of this LEP.

29 CFR 1910.212 All Machines

NAICS Code Industry

332117	Power Metallurgy Part Manufacturing
332439	Other Metal Container Manufacturing
332510	Hardware Manufacturing
332919	Other Metal Valve and pipe Fitting Manufacturing

332999 All Other Miscellaneous Fabricated Metal Products Manufacturing
 336360 Motor Vehicle Seating and Interior Trim Manufacturing
 332313 Plate Work Manufacturing
 332410 Power Boiler and Heat Exchanger Manufacturing
 332420 Metal Tank (Heavy Gauge) Manufacturing
 332312 Fabricated Structural Metal
 332999 All Other Miscellaneous Fabricated Metal Product Manufacturing
 332710 Machine Shops
 332813 Electroplating, Plating, Polishing, Anodizing and Coloring
 333319 Other Commercial and Service Industry Manufacturing
 333999 All Other Miscellaneous General Purpose Machinery Manufacturing
 334519 Other Measuring and Controlling Device Manufacturing
 332321 Metal Window and Door Manufacturing
 332116 Metal Stampings
 332214 Kitchen Utensil, Pot and Pan Manufacturing
 339911 Jewelry (except Costume) Manufacturing
 332618 Other Fabricated Wire Product Manufacturing
 336211 Motor Vehicle Body Manufacturing
 336312 Gasoline Engine and Engine Parts Manufacturing
 332618 Other fabricated Wire Product Manufacturing
 333924 Industrial Truck, Tractor, Trailer and Stacker Machinery
 Manufacturing
 336322 Other Motor Vehicle Electrical and Electronic Equipment
 Manufacturing
 336330 Motor vehicle Steering and Suspension Components (except Spring)
 Manufacturing
 336340 Motor Vehicle Brake System Manufacturing
 336350 Motor Vehicle Transmission and Power Train Parts Manufacturing
 336399 All Other Motor Vehicle Parts Manufacturing
 326121 Un-laminated Plastics Profile Shape Manufacturing
 326122 Plastics Pipe and Pipe Fitting Manufacturing
 326199 All Other Plastics Product Manufacturing
 337215 Showcase, Partition, Shelving and Locker Manufacturing
 339113 Surgical and Medical Instrument Manufacturing
 332321 Metal Window and Door Manufacturing
 332322 Sheet Metal Work Manufacturing
 332439 Other Metal Container Manufacturing
 333415 Air-Conditioning and Warm Air Heating Equipment and Commercial
 Refrigeration Equipment Manufacturing

29 CFR 1910.213 Woodworking Machinery

<u>NAICS Code</u>	<u>Industry</u>
332117	Powder Metallurgy Part Manufacturing
332439	Other Metal Container Manufacturing
332510	Hardware Manufacturing
332919	Other Metal Valve and Pipe Fitting Manufacturing
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing
321911	Wood Window and Door Manufacturing
321918	Other Millwork (including Flooring)
321991	Manufactured Home (Mobile Home) Manufacturing
326121	Un-laminated Plastics Profile Shape Manufacturing
326122	Plastics Pipe and Pipe Fitting Manufacturing
326199	All Other Plastics Product Manufacturing
337215	Showcase, Partition, Shelving and Locker Manufacturing
339113	Surgical and Medical Instrument Manufacturing
321113	Sawmills
321912	Cut Stock, Resawing Lumber, and Planing
321918	Other Millwork (including Flooring)
321920	Wood Container and Pallet Manufacturing
321999	All Other Miscellaneous Wood Product Manufacturing
337110	Wood Kitchen Cabinet and Countertop Manufacturing
337122	Non-upholstered Wood Household Furniture Manufacturing
337127	Institutional Furniture Manufacturing

29 CFR 1910.217 Power Presses

<u>NAICS Code</u>	<u>Industry</u>
332117	Powder Metallurgy Part Manufacturing
332439	Other Metal Container Manufacturing
332510	Hardware Manufacturing
332919	Other Metal Valve and Pipe Fitting Manufacturing
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing
336360	Motor Vehicle Seating and Interior Trim Manufacturing
337215	Showcase, Partition, Shelving and Locker Manufacturing
332313	Plate Work Manufacturing
332410	Power Boiler and Heat Exchanger Manufacturing
332420	Metal Tank (Heavy Gauge) Manufacturing
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial Refrigeration Equipment Manufacturing
332312	Fabricated Structural Metal Manufacturing
332510	Hardware Manufacturing
332722	Bolt, Nut, Screw, Rivet, and Washer Manufacturing

332321	Metal Window and Door Manufacturing
332116	Metal Stamping
332214	Kitchen Utensil, Pot, and Pan Manufacturing
332618	Other Fabricated Wire Product Manufacturing
336211	Motor Vehicle Body Manufacturing
336312	Gasoline Engine and Engine Parts Manufacturing
332618	Other Fabricated Wire Product Manufacturing
333924	Industrial Truck, Tractor, Trailer and Stacker Machinery Manufacturing
336322	Other Motor Vehicle Electrical and Electronic Equipment Mfg
336330	Motor vehicle Steering and Suspension Components (except spring) Manufacturing
336340	Motor Vehicle Brake System Manufacturing
336350	Motor Vehicle Transmission and Power Train Parts Manufacturing
336399	All Other Motor Vehicle Parts Manufacturing
332321	Metal Window and Door Manufacturing
332322	Sheet Metal Work Manufacturing
332439	Other metal Container Manufacturing

- C. Utah OSHA may add to the inspection scheduling list individual establishments where serious injuries, amputations, or fatalities related to saws, shears, slicers, power presses of all types and other machines have occurred in the last five years. Local evidence of amputations will be based on Integrated Management Information System (IMIS) and OIS accident data and, if available, by Bureau of Labor Statistic (BLS) and/or Utah Labor Commission Industrial Accidents Division (IAD) data, OSHA 300 data, National Institute for Occupational Safety and Health (NIOSH) data, and other reliable sources of information (e.g., reports of amputations from hospital admissions, emergency medical services, fire department, and police reports).
- D. Establishments which have had a comprehensive safety inspection in the previous 24 months and who have not had an amputation or significant injury during this period will not be added to the inspection scheduling list until the 24 month time period has elapsed.
- E. No more than one amputation LEP inspection will be conducted at each establishment/site every 24 months. Unprogrammed inspections, including monitoring inspections, follow-up inspections, referral inspections, complaint inspections, and accident investigations may be conducted at any time as applicable.
- F. Inspections shall concentrate on industries and establishments where saws, shears, slicers, power presses of all types and other machines as described in Appendix A are used, and/or where there have been serious injuries, amputations, or fatalities related to guarding of machines or equipment.

- G. Establishments identified under this LEP will be arranged alphabetically on the inspection scheduling list. Each establishment on the list will be assigned a sequential number with the first establishment on the list being number one. From the inspection scheduling list, a random list will then be developed, using a random number list (see Appendix C of CPL-02-00-025 for guidance) or an internet-based randomized sequence generator. The first cycle of twenty five establishments starting from the top of the randomized list will be selected for inspection. Compliance Safety and Health Officers (CSHOs) will be assigned inspections starting with the first establishment in a cycle and continuing until the current cycle is completed. Once a cycle is completed, the establishments selected in that cycle will be removed from the inspection scheduling list and placed on the completed establishment list. The remaining inspection scheduling list will be randomized again and the first twenty five establishments will be selected for the next inspection cycle. This process will be repeated until the entire scheduling list is completed.
- H. Due to Utah's dispersed and rural population centers, the Director or designee may select other establishments from the inspection scheduling list within a geographical region for an inspection. This will be done to reduce travel time to remote locations and improve efficiency of the inspection process. The Director must ensure that all establishments from the scheduling list within Utah OSHA's jurisdiction will be inspected within a reasonable time period.
- I. If any changes in the selection process are necessary, the Director or designee must approve the change and document the justification for the desired change.
- J. Prior to the compliance section supervisor assigning an unprogrammed inspection to the CSHO, the supervisor will check the inspection scheduling list to determine if the establishment assigned for inspection is on the list. If it is on the list, the unprogrammed inspection will be expanded to include the LEP inspection.

VII. Inspection Procedures:

- A. All inspections, conducted under this LEP, will be comprehensive machine guarding and lockout/tagout (LOTO) inspections, with the primary purpose of identifying amputation hazards. All inspections will include an evaluation of any equipment that may cause an amputation and should focus on hazards associated with power presses, saws, shears, slicers and other machines identified in Appendix A.
- B. To prepare for inspections under this LEP, all CSHOs should become familiar with the following OSHA standards and publications, as well as the OSHA eTools website regarding machine guarding:
 - 1. OSHA Instruction CPL 03-00-003, October 27, 2006, National Emphasis Program on Amputations.
 - 2. OSHA Standards contained in 29 CFR 1910 Subpart O, Machinery and Machine Guarding.

3. OSHA Standards contained in 29 CFR 1910 Subpart P, Hand and Portable Powered Tools& Other Hand Held Equipment.
 4. OSHA Publication 3157, A Guide for Protecting Workers from Woodworking Hazards.
 5. OSHA Publication 3170-02R, 2007, Safeguarding Equipment and Protecting Workers from Amputations.
 6. OSHA Technical Links Web Page, Machine Guarding, <https://www.osha.gov/SLTC/machineguarding/index.html>
- C. Once an inspection has been scheduled and assigned, the CSHO shall search the Federal OSHA website and IMIS/OIS for the employer's inspection history to ascertain whether the establishment has received an amputation LEP inspection or a comprehensive inspection within the last 24 months.
- D. The CSHO will enter the establishment and conduct the inspection according to the UFOM.
- E. During the opening conference, the CSHO shall request and review the establishment's OSHA 300 and 300A logs for the past three (3) years and the current year, looking for amputations and similar injuries that will direct the focus of the inspection.
- F. If the CSHO enters an establishment and determines there are no machines that present an amputation hazard, the CSHO will determine if an inspection should be conducted under another Utah OSHA LEP.
- G. During the walkthrough portion of the inspection, the CSHO will conduct a thorough inspection of the machine(s) with particular attention to employee exposure to nip points, pinch points, shear points, cutting actions, and other point(s) of operation. During the inspection, employee exposure to the following will be evaluated, in addition to other machine guarding-related issues observed:
1. Regular operation of the machine.
 2. Setup/threading/preparation for regular operation of the machine.
 3. Clearing jams or upset conditions.
 4. Making running adjustments while the machines are operating.
 5. Cleaning of the machine.
 6. Oiling or greasing of the machine or machine parts.
 7. Scheduled/unscheduled maintenance.
 8. Lockout/tagout.

- H. CSHOs will evaluate and inspect other hazards that are discovered or witnessed during the inspection.
- I. If during an unprogrammed inspection the CSHO discovers that an establishment has machines or equipment that are covered under this LEP, the CSHO will expand the inspection to include the elements of this Directive. The CSHO will report the LEP inspection to their supervisor who will add the establishment information to the completed inspection list.

VIII. OSHA Information System (OIS) Coding:

- A. For any programmed or unprogrammed inspection under this LEP, “GUARDLOCK” will be selected in the Inspection Emphasis Programs Field under Local Emphasis Program.
- B. In the Inspection Emphasis Programs Field of the OIS, select all National Emphasis Programs/Local Emphasis Programs (NEP/LEP) OIS codes applicable to the inspection.

IX. Program Evaluation:

- A. Abatement documentation/verification will be submitted to or otherwise collected by Utah OSHA for all violations. Proof of abatement must be placed in the case file immediately upon verification.
- B. Utah OSHA will prepare a written evaluation of this LEP in the format specified by OSHA Instruction CPL 04-00-001. The evaluation must respond to the questions outlined in Appendix C of this LEP, which is taken from Appendix A of CPL 04-00-001. Evaluations will be conducted at least annually and submitted to the Director or designee. The evaluation will include a recommendation for the continuation or elimination of this program.

X. Outreach and Education

The Director or designee will assure that Consultation and Education Services Section staff are familiar with this directive and actively promote the LEP when conducting outreach sessions and meetings. Machine guarding and lockout/tagout hazards covered by this LEP will be pointed out and discussed during outreach sessions and meetings. Handouts and publications that address these hazards, which are already developed and available, will be provided at outreach sessions and meetings. A copy of this LEP will be provided to interested parties upon request.

APPENDIX A

(To be used for guidance/not inclusive)

- Benders, Rollers and Shapers
- Press Breaks – All Types
- Casting Machinery
- Conveyors – Belt, Chain, Live Roller, and Auger Screw Conveyors
- Drills – Stationary
- Extruding Machinery
- Grinders, Abraders, and Meat Grinders
- Plastic Injection Molding Machinery
- Milling Machines
- Mixers, Blenders, Whippers, Slicers, and Food Beverage Processing Equipment
- Packing, Wrapping, Bundling Machinery
- Presses (Mechanical, Hydraulic, and Pneumatic)
- Sawing Machinery – (Band, Table, Radial Arm Saws)
- Shears (All types)

Descriptions of most of these machines, their amputation hazards and methods of controlling their amputation hazards can be found in OSHA Publication 3170-07R, Safeguarding Equipment and Protecting Workers from Amputations.

APPENDIX B

Related ANSI and ASME Standards:

(This appendix is not an inclusive list of all ANSI standards that are associated with hazardous machinery and equipment)

1. ANSI B11.1-1998 (R1994) Mechanical Power Presses
2. ANSI B11.2-1995 Hydraulic Power Presses
3. ANSI B11.3-1992 (R1994) Power Press Brakes
4. ANSI B11.4-1993 Shears
5. ANSI B11.5-1998 (R1994) Ironworkers
6. ANSI B11.6-1984 (R1994) Lathes
7. ANSI B11.7-1995 Cold Headers and Cold Formers
8. ANSI B11.8-1983 (R1994) Drilling, Milling, and Boring Machines
9. ANSI B11.9-1975 (R1997) Grinding Machinery
10. ANSI B11.10-1990 (R1997) Metal Sawing Machines
11. ANSI B11.11-1985 (R1994) Gear Cutting Machines
12. ANSI B11.12-1996 Roll-Forming and Roll-Bending Machines
13. ANSI B11.14-1996 Coil-Slitting Machines
14. ANSI B11.15-1984 (R1994) Pipe, Tube, and Shape Bending Machines
15. ANSI B11.16-1988 Metal Powder Compacting Presses
16. ANSI B11.17-1996 Horizontal Hydraulic Extrusion Presses
17. ANSI B11.18-1997 Machinery and Machine Systems for Processing Strip, Sheet or Plate from Coiled Configuration
18. ANSI B11.19-1990 (R1997) Safeguarding When Referenced by the Other B11 Machine Tool Safety Standards
19. ANSI B5.37-1970 (R1994) External Cylindrical Grinding Machines (Centerless)
20. ANSI B5.42-1981 (R1994) External Cylindrical Grinding Machines (Universal)
21. ANSI B65.1-1995 Printing Press Systems
22. ANSI B65.3-1991 Safety Standard for Guillotine Paper Cutters
23. ANSI B7.1-2000 Use, Care, and Protection of Abrasive Wheels
24. ANSI B151.5-1982 (R1988) Plastic Film and Sheet Winding Equipment
25. ANSI B151.20-1999 Plastic Sheet Production Machinery
26. ANSI B155.1-1994 Packaging Machinery and Packaging-Related Converting Machinery
27. ANSI B177.1-1997 Three Roller Printing Ink Mills
28. ANSI O1.1-1992 Woodworking Machinery
29. ASME B5.52M-1980 (R1994) Mechanical Power Presses, General Purpose Single Point
30. ASME B15.1-1996 Mechanical Power Transmission Apparatus
31. ASME B15.1A-1997 Addenda to B15.1-1996

32. ASME B15.1B-1998 Addenda to B15.1-1996
33. ASME B20.1-1996 Conveyors and Related Equipment, with Interpretations A and B
34. ASME B20.1A and B20.1B Addenda to B20.1-1996
35. ASME/CEMA 350-1988 Screw Conveyors
36. ASME/CEMA 401-1994 Unit Handling Conveyors – Roll Conveyors – Non-Powered
37. ASME/CEMA 402-1992 Unit Handling Conveyors – Belt Conveyors
38. ASME/CEMA 403-1985 Unit Handling Conveyors – Belt Driven Live Conveyors
39. ASME/CEMA 404-1985 Unit Handling Conveyors – Chain Driven Live Conveyors
40. ASME/CEMA 405-1985 Packaging Handling Conveyors – Slant Conveyors Conveyor

APPENDIX C

PROGRAM EVALUATION ITEMS FOR LOCAL EMPHASIS PROGRAMS (LEPs)

The program evaluations of LEPs required by this instruction shall address the following items:

1. What is the goal of the LEP? Briefly describe the purpose of the LEP (e.g. eliminate dangerous process(es), exposure to safety and health hazards, injuries/illnesses or fatalities) and include any specifics that caused you to choose this program. How does it support OSHA's Strategic Plan?

2. In your opinion, did the LEP meet its goal?

Indicate if the program was:

- highly effective,
- effective,
- less than effective, or
- ineffective.

If this determination is not possible, indicate accordingly and briefly explain.

3. What data and information do you have to support your conclusion(s)?

At a minimum, consider the following areas of information in making your response. Note that some of the subjects listed at 3.a. through g. will not apply to every LEP. Where a subject is clearly not applicable or no responsive information can be ascertained, this should be so noted in the evaluation.

- a. Enforcement statistics. Include:

- Number of inspections;
- Number of inspections in compliance;
- Number of "no inspection" cases;
- Percent of violations cited that are serious;
- Number of employees covered by inspection;
- Dollar amount of penalties assessed;
- Percent of citations contested;
- Number of significant cases;
- Average violations per inspection; and
- Any other data which may be relevant to supporting your conclusion.

- b. Significant and egregious cases:

List and briefly describe all significant and egregious cases, if any.

- c. Serious hazards eliminated.

In responding, consider important:

- Repeat violations.
- Hazards cited for a given employer that do not reappear once abated, such as hazardous airborne substances in an unventilated workplace area.

- d. Evaluate and briefly comment on the overall list of standards cited to determine whether the LEP is addressing the goal.
 - e. Decline in occupational injuries, illnesses, and fatalities for the establishments covered by the LEP:
 - Have injuries, illnesses, and/or fatalities declined in the State of Utah because of the program?
 - Did the program cause a reduction of specific injuries, illnesses and/or fatalities that are common to the covered industries?
 - f. Impact on covered, non-inspected employers (deterrent effect on employers):

Were covered employers who were not inspected aware of the LEP, and did they eliminate serious hazards targeted by the program? If so, briefly describe significant example(s).

NOTE: Information regarding a deterrent effect might be detected from outreach sessions, new constituency groups, informal conferences, and speech and information requests.
 - g. Impact on suppliers of production equipment (shadow effect on suppliers):

Were manufacturers of production equipment aware of the LEP, and did they respond by modifying their products to minimize employee exposure to occupational hazards? If so, briefly describe significant example(s).
4. Should the LEP be continued?

Answer "yes" or "no" and give a brief rationale.
 5. Have any legal issues arisen that should be brought to the attention of Assistant Attorney General (AAG) if the LEP is to be proposed for renewal?

If "yes," describe them in sufficient detail for AAG to make a determination.
 6. Are there any other comments or recommendations?

Consider any findings which might influence Regional or National OSHA programs and policies. Also, consider economic and technological factors impacting industries covered under the LEP, which could only be changed by revising the production process and would be beyond the employer's current financial capabilities.