

**OREGON OCCUPATIONAL SAFETY AND HEALTH DIVISION
DEPARTMENT OF CONSUMER AND BUSINESS SERVICES**

PROGRAM DIRECTIVE

Program Directive: A-280

Issued: February 4, 2011

Revised: October 15, 2015

- SUBJECT:** **National Emphasis Program (NEP) on Amputations**
- PURPOSE:** This directive describes policies and procedures for implementing a National Emphasis Program (NEP) to identify and reduce workplace machinery and equipment hazards which may cause amputations.
- SCOPE:** This directive applies to all of Oregon OSHA.
- REFERENCES:** (See Appendix E)
- ACTION:** The Statewide Safety Enforcement Manager and field enforcement managers must ensure that Oregon OSHA employees follow the procedures established in this directive when conducting programmed inspections.
- APPLICATION:** This directive applies to general industry workplaces with machinery or equipment likely to cause amputations. See Appendix D (not inclusive) for guidance on the types of machinery or equipment most often associated with amputations.
- BACKGROUND:** Primary causes of amputation are failure to properly apply machine guarding techniques or to adequately control hazardous energy during servicing and/or maintenance activities.
- Injuries involving machinery and/or equipment often result in death or permanent disability, as indicated by Oregon OSHA's inspection history.
- TARGETING/SITE SELECTION:** Inspections conducted under this NEP will be scheduled and conducted in workplaces where:
- There is machinery and/or equipment that cause (or are capable of causing) amputations or
 - Amputations have occurred.

Developing Inspection Lists: Using the most recent available employer information, a master list of establishments will be developed using the identified NAICS codes in Appendix B of this directive.

The enforcement analysts can add to the master list of general industry establishments where amputation injuries or fatalities related to machinery and/or equipment have occurred based on Oregon data. Local evidence of amputations are based on Integrated Management Information System (IMIS) accident data and, if available, workers' compensation data, OSHA 300 data, NIOSH data, and other reliable sources of information (e.g., reports of amputations from hospital admissions, emergency medical services, fire department, and police reports).

Based on local knowledge, field office managers may DATA ERROR establishments that are not likely to have targeted machinery and/or equipment, or firms known to be out of business, documenting the basis for the determinations. Compliance safety and health officers (CSHOs) will proceed with the programmed inspection when it is determined that a new business is using the same plant and equipment of the previous business. Further, any establishment, other than those where amputations are known to have occurred, that had a comprehensive safety inspection in the previous 36 months, will be deleted from the list.

Once the master list with additions and deletions is completed, each establishment is randomized and given a RANK number. The Location Detail Reports will show if the employer is on any other fixed industry scheduling or emphasis list.

Inspections may then be scheduled from the emphasis list. Establishments on the list will be inspected in order, however, the field office manager(s) will ensure resources are efficiently used and may inspect out of order. Once a list has been run, all establishments in the list will be inspected before a new list is run, except for any carryovers that are allowed. (Run 1 or Run 2, etc.) A new list will be run at least annually.

**NATIONAL DATA
SELECTION
CRITERIA:**

The targeting methodology includes federal IMIS violation data from the following standards: [1910.147](#), *The Control of Hazardous Energy (Lockout/Tagout)*; [1910.212](#), *General Requirements for all Machines*; [1910.213](#), *Woodworking Machinery*; [1910.217](#), *Mechanical Power Presses*; and [1910.219](#), *Mechanical Power-Transmission Apparatus*. These standards are combined with BLS amputation numbers and rates (See Appendix C).

The selected 2007 NAICS have high IMIS violations coupled with high BLS amputation numbers or high IMIS violations coupled with high BLS amputation rates:

2007 NAICS Code	2007 NAICS Title
311411	Frozen Fruit, Juice, and Vegetable Manufacturing
311412	Frozen Specialty Food Manufacturing
311511	Fluid Milk Manufacturing
311512	Creamery Butter Manufacturing
311513	Cheese Manufacturing
311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing
311611	Animal (except Poultry) Slaughtering
311612	Meat Processed from Carcasses
311613	Rendering and Meat Byproduct Processing
311615	Poultry Processing
311811	Retail Bakeries
311812	Commercial Bakeries
311813	Frozen Cakes, Pies, and Other Pastries Manufacturing
311991	Perishable Prepared Food Manufacturing
311999	All Other Miscellaneous Food Manufacturing
321113	Sawmills
321114	Wood Preservation
321911	Wood Window and Door Manufacturing
321912	Cut Stock, Resawing Lumber, and Planing
321918	Other Millwork (including Flooring)
321920	Wood Container and Pallet Manufacturing
322211	Corrugated and Solid Fiber Box Manufacturing
322212	Folding Paperboard Box Manufacturing
322213	Setup Paperboard Box Manufacturing
322214	Fiber Can, Tube, Drum, and Similar Products Manufacturing
322215	Nonfolding Sanitary Food Container Manufacturing
322221	Coated and Laminated Packaging Paper Manufacturing
322222	Coated and Laminated Paper Manufacturing
322223	Coated Paper Bag and Pouch Manufacturing
322224	Uncoated Paper and Multiwall Bag Manufacturing
322225	Laminated Aluminum Foil Manufacturing for Flexible Packaging Uses
322226	Surface-Coated Paperboard Manufacturing
323110	Commercial Lithographic Printing
323111	Commercial Gravure Printing
323112	Commercial Flexographic Printing
323114	Quick Printing
323115	Digital Printing
323116	Manifold Business Forms Printing
323118	Blankbook, Looseleaf Binders, and Devices Manufacturing
323119	Other Commercial Printing
323113	Commercial Screen Printing
323117	Books Printing
326111	Plastics Bag and Pouch Manufacturing
326112	Plastics Packaging Film and Sheet (including Laminated) Manufacturing
326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing
326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing
326160	Plastics Bottle Manufacturing
327320	Ready-Mix Concrete Manufacturing
327390	Other Concrete Product Manufacturing
331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding

331492	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)
332111	Iron and Steel Forging
332112	Nonferrous Forging
332114	Custom Roll Forming
332117	Powder Metallurgy Part Manufacturing
332115	Crown and Closure Manufacturing
332116	Metal Stamping
332311	Prefabricated Metal Building and Component Manufacturing
332312	Fabricated Structural Metal Manufacturing
332313	Plate Work Manufacturing
332321	Metal Window and Door Manufacturing
332322	Sheet Metal Work Manufacturing
332323	Ornamental and Architectural Metal Work Manufacturing
332710	Machine Shops
332991	Ball and Roller Bearing Manufacturing
332992	Small Arms Ammunition Manufacturing
332993	Ammunition (except Small Arms) Manufacturing
332994	Small Arms Manufacturing
332995	Other Ordnance and Accessories Manufacturing
332996	Fabricated Pipe and Pipe Fitting Manufacturing
332997	Industrial Pattern Manufacturing
332998	Enameled Iron and Metal Sanitary Ware Manufacturing
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing
333111	Farm Machinery and Equipment Manufacturing
333112	Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing
333611	Turbine and Turbine Generator Set Units Manufacturing
333612	Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing
333613	Mechanical Power Transmission Equipment Manufacturing
333618	Other Engine Equipment Manufacturing
334510	Electromedical and Electrotherapeutic Apparatus Manufacturing
334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing
334512	Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use
334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables
334514	Totalizing Fluid Meter and Counting Device Manufacturing
334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals
334516	Analytical Laboratory Instrument Manufacturing
334517	Irradiation Apparatus Manufacturing
334518	Watch, Clock, and Part Manufacturing
334519	Other Measuring and Controlling Device Manufacturing
336211	Motor Vehicle Body Manufacturing
336212	Truck Trailer Manufacturing
336213	Motor Home Manufacturing
336214	Travel Trailer and Camper Manufacturing
337110	Wood Kitchen Cabinet and Countertop Manufacturing
337121	Upholstered Household Furniture Manufacturing
337122	Nonupholstered Wood Household Furniture Manufacturing
337124	Metal Household Furniture Manufacturing
337125	Household Furniture (except Wood and Metal) Manufacturing
337127	Institutional Furniture Manufacturing

Note: The NAICS are listed in ascending numerical order (not in the order of high IMIS violations, high BLS amputation numbers or high amputation rates). (See Appendix B for a list of 2007 NAICS/2012 NAICS conversion)

INSPECTION PROCEDURES:

Inspections initiated under this NEP will be scheduled and conducted in accordance with provisions of the Field Inspection Reference Manual (FIRM), except as noted below.

Once an inspection has been scheduled and assigned for the identified establishment, the CSHO will search the employer database for the employer's citation and fatality/accident history prior to the opening conference. This review is to determine if anything covered in this NEP (amputations or lockout tagout) has been covered in previous inspections. This information will be used to further indicate if that employer will be Data Errored or deleted from the list for that year.

At the opening conference, the CSHO will verify with the employer whether any machinery and/or equipment in Appendix D or any other machinery and equipment that could cause amputations is present. If any machinery and equipment associated with amputations are present in the workplace, the CSHO should exercise professional judgment in conducting an inspection of the machinery and/or equipment with particular attention to employee exposure to nip points, pinch points, shear points, cutting actions, and other point(s) of operation. The CSHO should consider and evaluate employee exposures during any of the following:

- Regular operation of the machine;
- Setup/threading/preparation for regular operation of the machine;
- Clearing jams or upset conditions;
- Making running adjustments while the machine is operating;
- Cleaning the machine;
- Oiling or greasing the machine or machine pans;
- Scheduled/unscheduled maintenance; and
- Locking out or tagging out.

Before proceeding with the inspection, review OSHA 300 log(s) to identify recorded amputations associated with machinery and equipment.

Inspections are scheduled beginning with the current fiscal year, and will continue until further notice or until all establishments on the list have been inspected.

Complaints and Referrals:

Every complaint or referral for any operation where there is the potential for exposure must be handled following all policies and procedures set in place. If that employer is also on the regular scheduling list, a comprehensive inspection will be performed.

TRAINING: Because of the technical nature of some of these inspections, staff must have adequate training or experience with both general and specific machine guarding concepts and techniques and with hazardous energy control (lockout/tagout) program requirements. In situations that require specific expertise on guarding of specialized equipment, the CSHO or consultant will consult with their manager for guidance.

RECORDING IN OTIS (Oregon OSHA's database for enforcement data):

Use the following instructions for completing the appropriate inspection classification for inspections under this NEP.

- A. **Amputation Initiative Only Inspections.** The Inspection Forms must be marked as type "Programmed Planned" and the scope marked as Partial. The "NEP" value "AMPUTATE" must be recorded in under the Emphasis Tab.
- B. **Amputation Initiative Combined with Unprogrammed Inspections.** For all unprogrammed inspections conducted in conjunction with an amputations inspection, the Inspection Forms must be marked as type "Unprogrammed" and the scope marked as Partial with the appropriate Unprogrammed activity identified under the Related/Optional Tab. The "NEP" value "AMPUTATE" must be recorded under the Emphasis Tab.
- C. **Amputation Initiative Combined with NEP or LEP Inspections.** For all programmed inspections such as NEPs and LEPs conducted in conjunction with an amputations inspection, the Inspection Forms must be marked as type "Programmed Planned" and the scope marked as Partial. The "NEP" value "AMPUTATE" must be recorded under the Emphasis Tab. Code any other NEP or LEP with the appropriate codes.
- D. **Amputation Initiative Combined with Scheduling list Inspections.** For all programmed inspections conducted in conjunction with an amputations inspection, the Inspection Forms must be marked as type "Programmed Planned" and the scope marked as **Comprehensive**. The "NEP" value "AMPUTATE" must be recorded under the Emphasis Tab.

NEW RULE: OAR 437-001-0704 has new requirements for reporting work-related fatalities, hospitalizations, amputations, avulsions, or losses of an eye. The new rule goes into effect on Jan. 1, 2016. **As part of this NEP**, if a report of amputation is received and the employer's classified activity is one of the identified NAICS codes, Oregon OSHA will conduct an inspection. There are two major changes to the former reporting requirements:

- A. First, whereas the former regulation applied to incidents which resulted in one or more fatalities, hospitalizations of three or more employees, or overnight hospitalization of one employee, the regulation is expanded to require the reporting of all work related fatalities, all work-related in patient hospitalizations of one or more employees, all work-related amputations or avulsions, and all work-related losses of an eye.
- B. Second, for any in-patient hospitalization, amputation, avulsion, or eye loss, employers must report the incident within 24 hours of learning about it. Fatalities must be reported within 8 hours of learning of the incident.

For reporting purposes:

- Report an amputation or avulsion only if it includes bone and/or cartilage loss.
- Report an amputation or avulsion only if it occurs within 24 hours of the incident that caused the amputation or avulsion.
- Report the loss of an eye only if it occurs within 24 hours of the incident that caused the loss

EFFECTIVE

DATE:

This directive is effective immediately and will remain in effect until cancelled or superseded.

History: Issued 2-4-2011 Revised 10-15-2015

- APPENDICES:**
- A - Related ANSI and ASME Standards**
 - B - 2007 – 2012 NAICS Conversion of Industries in this NEP**
 - C - Amputations Targeting Methodology**
 - D - Sources of Amputations: Machinery and Equipment**
 - E - References**

APPENDIX A

Related ANSI and ASME Standards

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

Oregon OSHA recognizes the value of national consensus standards in terms of useful guidance for employers and employees attempting to comply with specific OSHA standards.

Oregon OSHA's enforcement policy provides that a violation may be *de minimis* if an employer complies with a proposed standard or amendment or a consensus standard rather than with the standard in effect at the time of the inspection, *and* the employer's action clearly provides equal or greater employee protection.

1. ANSI B11.1- Mechanical Power Presses
2. ANSI B11.2- Hydraulic Power Presses
3. ANSI B11.3- Power Press Brakes
4. ANSI B11.4- Shears
5. ANSI B11.5- Ironworkers
6. ANSI B11.6- Lathes
7. ANSI B11.7- Cold Headers and Cold Formers
8. ANSI B11.8- Drilling, Milling, and Boring Machines
9. ANSI B11.9- Grinding Machinery
10. ANSI B11.10- Metal Sawing Machines
11. ANSI B11.11- Gear Cutting Machines
12. ANSI B11.12- Roll-Forming and Roll-Bending Machines
13. ANSI B11.14- Coil-Slitting Machines
14. ANSI B11.15- Pipe, Tube, and Shape Bending Machines
15. ANSI B11.16- Metal Powder Compacting Presses
16. ANSI B11.17- Horizontal Hydraulic Extrusion Presses
17. ANSI B11.18- Machinery and Machine Systems for Processing Strip, Sheet, or Plate From Coiled Configuration
18. ANSI B11.19- Safeguarding When Referenced by the Other B11 Machine Tool Safety Standards
19. ANSI B5.37- External Cylindrical Grinding Machines (Centerless)
20. ANSI B5.42- External Cylindrical Grinding Machines (Universal)
21. ANSI B65.1- Printing Press Systems
22. ANSI B65.2- Safety Standard – Binding and Finishing Systems
23. ANSI B65.3- Safety Standard for Guillotine Paper Cutters
24. ANSI B7.1- Use, Care, and Protection of Abrasive Wheels
25. ANSI B151.5- Plastic Film and Sheet Winding Equipment
26. ANSI B151.20- Plastic Sheet Production Machinery
27. ANSI B155.1- Packaging Machinery and Packaging-Related Converting Machinery
28. ANSI B177.1- Three Roller Printing Ink Mills
29. ANSI O1.1- Woodworking Machinery
30. ANSI Z244.1- Control of Hazardous Energy - Lockout/Tagout and Alternative Methods
31. ASME B5.52M- Mechanical Power Presses, General Purpose Single Point
32. ASME B15.1- Mechanical Power Transmission Apparatus
33. ASME B15.1A- Addenda to B15.1
34. ASME BL5.1B- Addenda to B15.1
35. ASME B20.1- Conveyors and Related Equipment, with Interpretations A and B
36. ASME B20.1A and B20.1B- Addenda to B20.1

37. ASME/CEMA 350- Screw Conveyors
38. ASME/CEMA 401- Unit Handling Conveyors - Roller Conveyors - Non-Powered
39. ASME/CEMA 402- Unit Handling Conveyors - Belt Conveyors
40. ASME/CEMA 403- Unit Handling Conveyors - Belt Driven Live Roller Conveyors
41. ANSI/CEMA 404- Unit Handling Conveyors - Chain Driven Live Roller Conveyors
42. ANSI/CEMA 405- Packaging Handling Conveyors - Slant Conveyors

APPENDIX B

This appendix is a list of selected NAICS codes that have high IMIS violations coupled with high BLS amputation numbers or high IMIS violations coupled with high BLS amputation rates.

Note: The industry NAICS Codes are listed in ascending numerical order (not in the order of high IMIS violations, high BLS amputation numbers or high amputation rates).

2007 NAICS U.S. Matched to 2012 NAICS U.S. (Full Concordance)			
(Note: 2012 NAICS codes in bold indicate pieces of the 2012 industry came from more than one 2007 NAICS industry; 2007 NAICS codes in italics indicate the 2007 industry split to two or more 2012 NAICS industries.)			
2007 NAICS Code	2007 NAICS Title (and specific piece of the 2007 industry that is contained in the 2012 industry)	2012 NAICS Code	2012 NAICS Title
311411	Frozen Fruit, Juice, and Vegetable Manufacturing	311411	Frozen Fruit, Juice, and Vegetable Manufacturing
311412	Frozen Specialty Food Manufacturing	311412	Frozen Specialty Food Manufacturing
311511	Fluid Milk Manufacturing	311511	Fluid Milk Manufacturing
311512	Creamery Butter Manufacturing	311512	Creamery Butter Manufacturing
311513	Cheese Manufacturing	311513	Cheese Manufacturing
311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing	311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing
311611	Animal (except Poultry) Slaughtering	311611	Animal (except Poultry) Slaughtering
311612	Meat Processed from Carcasses	311612	Meat Processed from Carcasses
311613	Rendering and Meat Byproduct Processing	311613	Rendering and Meat Byproduct Processing
311615	Poultry Processing	311615	Poultry Processing
311811	Retail Bakeries	311811	Retail Bakeries
311812	Commercial Bakeries	311812	Commercial Bakeries
311813	Frozen Cakes, Pies, and Other Pastries Manufacturing	311813	Frozen Cakes, Pies, and Other Pastries Manufacturing
311991	Perishable Prepared Food Manufacturing	311991	Perishable Prepared Food Manufacturing
311999	All Other Miscellaneous Food Manufacturing	311999	All Other Miscellaneous Food Manufacturing
321113	Sawmills	321113	Sawmills
321114	Wood Preservation	321114	Wood Preservation
321911	Wood Window and Door Manufacturing	321911	Wood Window and Door Manufacturing
321912	Cut Stock, Resawing Lumber, and Planing	321912	Cut Stock, Resawing Lumber, and Planing
321918	Other Millwork (including Flooring)	321918	Other Millwork (including Flooring)
321920	Wood Container and Pallet Manufacturing	321920	Wood Container and Pallet Manufacturing
322211	Corrugated and Solid Fiber Box Manufacturing	322211	Corrugated and Solid Fiber Box Manufacturing
322212	Folding Paperboard Box Manufacturing	322212	Folding Paperboard Box Manufacturing
322213	Setup Paperboard Box Manufacturing	322219	Other Paperboard Container Manufacturing
322214	Fiber Can, Tube, Drum, and Similar Products Manufacturing	322219	Other Paperboard Container Manufacturing
322215	Nonfolding Sanitary Food Container Manufacturing	322219	Other Paperboard Container Manufacturing

322221	Coated and Laminated Packaging Paper Manufacturing	322220	Paper Bag and Coated and Treated Paper Manufacturing
322222	Coated and Laminated Paper Manufacturing	322220	Paper Bag and Coated and Treated Paper Manufacturing
322223	Coated Paper Bag and Pouch Manufacturing	322220	Paper Bag and Coated and Treated Paper Manufacturing
322224	Uncoated Paper and Multiwall Bag Manufacturing	322220	Paper Bag and Coated and Treated Paper Manufacturing
322225	Laminated Aluminum Foil Manufacturing for Flexible Packaging Uses	322220	Paper Bag and Coated and Treated Paper Manufacturing
322226	Surface-Coated Paperboard Manufacturing	322220	Paper Bag and Coated and Treated Paper Manufacturing
323110	Commercial Lithographic Printing	323111	Commercial Printing (except Screen and Books)
323111	Commercial Gravure Printing	323111	Commercial Printing (except Screen and Books)
323112	Commercial Flexographic Printing	323111	Commercial Printing (except Screen and Books)
323114	Quick Printing	323111	Commercial Printing (except Screen and Books)
323115	Digital Printing	323111	Commercial Printing (except Screen and Books)
323116	Manifold Business Forms Printing	323111	Commercial Printing (except Screen and Books)
323118	Blankbook, Looseleaf Binders, and Devices Manufacturing	323111	Commercial Printing (except Screen and Books)
323119	Other Commercial Printing	323111	Commercial Printing (except Screen and Books)
323113	Commercial Screen Printing	323113	Commercial Screen Printing
323117	Books Printing	323117	Books Printing
326111	Plastics Bag and Pouch Manufacturing	326111	Plastics Bag and Pouch Manufacturing
326112	Plastics Packaging Film and Sheet (including Laminated) Manufacturing	326112	Plastics Packaging Film and Sheet (including Laminated) Manufacturing
326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing
326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing	326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing
326160	Plastics Bottle Manufacturing	326160	Plastics Bottle Manufacturing
327320	Ready-Mix Concrete Manufacturing	327320	Ready-Mix Concrete Manufacturing
327390	Other Concrete Product Manufacturing	327390	Other Concrete Product Manufacturing
331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding	331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding
331492	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)	331492	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)
332111	Iron and Steel Forging	332111	Iron and Steel Forging
332112	Nonferrous Forging	332112	Nonferrous Forging
332114	Custom Roll Forming	332114	Custom Roll Forming
332117	Powder Metallurgy Part Manufacturing	332117	Powder Metallurgy Part Manufacturing

332115	Crown and Closure Manufacturing	332119	Metal Crown, Closure, and Other Metal Stamping (except Automotive)
332116	Metal Stamping	332119	Metal Crown, Closure, and Other Metal Stamping (except Automotive)
332311	Prefabricated Metal Building and Component Manufacturing	332311	Prefabricated Metal Building and Component Manufacturing
332312	Fabricated Structural Metal Manufacturing	332312	Fabricated Structural Metal Manufacturing
332313	Plate Work Manufacturing	332313	Plate Work Manufacturing
332321	Metal Window and Door Manufacturing	332321	Metal Window and Door Manufacturing
332322	Sheet Metal Work Manufacturing	332322	Sheet Metal Work Manufacturing
332323	Ornamental and Architectural Metal Work Manufacturing	332323	Ornamental and Architectural Metal Work Manufacturing
332710	Machine Shops	332710	Machine Shops
332991	Ball and Roller Bearing Manufacturing	332991	Ball and Roller Bearing Manufacturing
332992	Small Arms Ammunition Manufacturing	332992	Small Arms Ammunition Manufacturing
332993	Ammunition (except Small Arms) Manufacturing	332993	Ammunition (except Small Arms) Manufacturing
332994	Small Arms Manufacturing	332994	Small Arms, Ordnance, and Ordnance Accessories Manufacturing
332995	Other Ordnance and Accessories Manufacturing	332994	Small Arms, Ordnance, and Ordnance Accessories Manufacturing
332996	Fabricated Pipe and Pipe Fitting Manufacturing	332996	Fabricated Pipe and Pipe Fitting Manufacturing
332997	Industrial Pattern Manufacturing	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing
332998	Enameled Iron and Metal Sanitary Ware Manufacturing	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing
333111	Farm Machinery and Equipment Manufacturing	333111	Farm Machinery and Equipment Manufacturing
333112	Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing	333112	Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing
333611	Turbine and Turbine Generator Set Units Manufacturing	333611	Turbine and Turbine Generator Set Units Manufacturing
333612	Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing	333612	Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing
333613	Mechanical Power Transmission Equipment Manufacturing	333613	Mechanical Power Transmission Equipment Manufacturing
333618	Other Engine Equipment Manufacturing	333618	Other Engine Equipment Manufacturing
334510	Electromedical and Electrotherapeutic Apparatus Manufacturing	334510	Electromedical and Electrotherapeutic Apparatus Manufacturing
334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing
334512	Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use	334512	Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use

334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables
334514	Totalizing Fluid Meter and Counting Device Manufacturing	334514	Totalizing Fluid Meter and Counting Device Manufacturing
334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals	334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals
334516	Analytical Laboratory Instrument Manufacturing	334516	Analytical Laboratory Instrument Manufacturing
334517	Irradiation Apparatus Manufacturing	334517	Irradiation Apparatus Manufacturing
334518	Watch, Clock, and Part Manufacturing	334519	Other Measuring and Controlling Device Manufacturing
334519	Other Measuring and Controlling Device Manufacturing	334519	Other Measuring and Controlling Device Manufacturing
336211	Motor Vehicle Body Manufacturing	336211	Motor Vehicle Body Manufacturing
336212	Truck Trailer Manufacturing	336212	Truck Trailer Manufacturing
336213	Motor Home Manufacturing	336213	Motor Home Manufacturing
336214	Travel Trailer and Camper Manufacturing	336214	Travel Trailer and Camper Manufacturing
337110	Wood Kitchen Cabinet and Countertop Manufacturing	337110	Wood Kitchen Cabinet and Countertop Manufacturing
337121	Upholstered Household Furniture Manufacturing	337121	Upholstered Household Furniture Manufacturing
337122	Nonupholstered Wood Household Furniture Manufacturing	337122	Nonupholstered Wood Household Furniture Manufacturing
337124	Metal Household Furniture Manufacturing	337124	Metal Household Furniture Manufacturing
337125	Household Furniture (except Wood and Metal) Manufacturing	337125	Household Furniture (except Wood and Metal) Manufacturing
337127	Institutional Furniture Manufacturing	337127	Institutional Furniture Manufacturing

APPENDIX C
AMPUTATIONS
TARGETING METHODOLOGY

NATIONAL DATA:

Selection Process for Industries with Significant Inspection Histories (High IMIS¹ Numbers and OIS² Numbers).

Category 1.

1. Federal OSHA selected five standards (29 CFR 1910.147, .212, .213, .217, and .219) that are generally recognized as being related to amputation hazards.
2. Federal OSHA IMIS and OIS data covering fiscal years 2006-2014 identified those industries with 40 or more federal OSHA inspections with one or more violations of the standards listed in #1 above.
3. Federal OSHA limited the range to the NAICS Sector 31-33, Manufacturing. This range encompasses all manufacturing operations and addresses amputation issues.
4. Oregon OSHA may add or delete as needed.

Selection Process for Industries with High BLS Rates:

Category 2.

1. Federal OSHA used the most recent five years of BLS Data (Calendar year 2009, 2010, 2011, 2012 and 2013) on incidence rates for nonfatal occupational injuries and illnesses involving days away from work per 10,000 full-time workers.
2. Federal OSHA limited the range to the NAICS Sector 31-33, Manufacturing.
3. Federal OSHA selected NAICS with BLS incidence rates of 10.0 or greater for amputations for any year.

BLS Data Selection Process for Industries with High BLS Numbers:

Category 3.

1. Federal OSHA used the most recent five years of BLS Data (Calendar year 2009, 2010, 2011, 2012 and 2013) on the number of amputations.
2. Federal OSHA limited the range to the NAICS Sector 31-33, Manufacturing.
3. Federal OSHA selected NAICS with BLS numbers of 50 or more amputations per year.
4. Federal OSHA then selected the industries that had high IMIS/OIS violations coupled with high BLS rates or high IMIS/OIS violations coupled with high BLS numbers.

Based on the above data, the NAICS codes listed in Appendix B comprise Oregon OSHA's list of industries that will be a part of the National Emphasis Program for Amputations.

1 IMIS- Integrated Management Information System. Federal OSHA's database for enforcement data.

2 OIS – OSHA Information System (Federal OSHA)

APPENDIX D
(To be used for guidance/not inclusive)

2012 (Table R-25*) Combined Amputation Sources
Sources of Amputations: Machinery and Equipment
Agricultural, garden machinery, bailers
Aerial lift platforms
Benders, Rollers and Shapers
Cranes (unspecified)
Casting Machinery
Conveyors – Belt, Chain, Live Roller, and Auger Screw Conveyors
Heating and cooking machinery and appliances
Drills – Stationary
Extruding Machinery
Food and Beverage Processing
Grinders, Abraders, and Meat Grinders
Material and personnel handling machinery
Metal, woodworking, and special material machinery
Milling Machines
Mowing machinery
Mixers, Blenders, Whippers, Slicers, and Food Beverage Processing Equipment
Packing, Wrapping, Bundling Machinery
Plastic Injection Molding Machinery
Press Brakes (All Types)
Presses (Mechanical, Hydraulic, and Pneumatic)
Printing Presses
Sawing Machinery - (Band, Table, Radial Arm Saws)
Shears (All Types)

***Bureau of Labor Statistics (BLS) Table R25. Number of nonfatal occupational injuries and illnesses involving days away from work by source of injury or illness and selected natures of injury or illness, private industry, 2012 —**

APPENDIX E

REFERENCES

- A. Oregon OSHA Standards, Division 2, Subdivision J, General Environmental Controls, [1910.147](#), The Control of Hazardous Energy (Lockout/Tagout); [Subdivision O](#), Machinery and Machine Guarding; and [Subdivision P](#), Hand and Portable Powered Tools & Other Hand-Held Equipment
- B. Oregon OSHA [Publication 4755, Foundation of a Safe Workplace](#)
- C. Oregon OSHA [Program Directive A-244, Inspection Criteria: Scheduling Lists for Safety and Health Inspections](#)
- D. Oregon OSHA [Program Directive A-156, Control of Hazardous Energy "Lockout/Tagout"](#)
- E. Oregon OSHA Field Inspection Reference Manual (FIRM)
- F. [CPL 03-00-019](#), National Emphasis Program on Amputations (effective date 8/13/15)
- G. Web topic pages: Machine Guarding and Control of Hazardous Energy
<http://www.osha.gov/SLTC/machineguarding/index.html>
http://www.cbs.state.or.us/external/osha/subjects/machine_guarding.html
<http://www.osha.gov/SLTC/controlhazardousenergy/index.html>
http://www.cbs.state.or.us/external/osha/subjects/control_of_hazardous_energy.html
- H. Bureau of Labor Statistics (BLS), Table R1. Number of Nonfatal Occupational Injuries and Illnesses Involving Days Away From Work by Industry and Selected Natures of Injury or Illness, , (Calendar year 2009, 2010, 2011, 2012 and 2013)
<http://www.bls.gov/news.release/pdf/osh2.pdf>
- I. Bureau of Labor Statistics (BLS), Table R5. Incidence Rates for Nonfatal Occupational Injuries and Illnesses by Involving Days Away From Work per 10,000 Full-Time Workers by Industry and Selected Natures of Injury or Illness, (Calendar year 2009, 2010, 2011, 2012 and 2013) <http://www.bls.gov/iif/oshcdnew.htm>
- J. Bureau of Labor Statistics (BLS), Table R25. Number of Nonfatal Occupational Injuries and Illnesses Involving Days Away From Work by Source of Injury or Illness and Selected Natures of Injury or Illness, (Calendar year 2009, 2010 and 2011, 2012 and 2013)
- K. Executive Office of the President, North American Industry Classification System, United States, 2012