



OSHA REGIONAL NOTICE

U.S. DEPARTMENT OF LABOR

Occupational Safety and Health Administration

DIRECTIVE NUMBER: 19-11 (CPL 04-05) | **EFFECTIVE DATE:** October 1, 2018

SUBJECT: Local Emphasis Program for Beverage Manufacturing

REGIONAL IDENTIFIER: Region VIII

ABSTRACT

Purpose: This Notice establishes and implements a Local Emphasis Program (LEP) for the purpose of reducing employee exposure to hazards associated with beverage manufacturing processes in general industry operations, including, but not limited to, confined space hazards, fall hazards, injury or illness from physical hazards (such as hearing loss and musculoskeletal disorders), and chemical exposure which is causing or likely to cause severe injury, permanent disability, or death.

Scope: This Notice applies to the jurisdiction of the Englewood Area Office

References: OSHA Instruction CPL 04-00-001, Procedures for Approval of Local Emphasis Programs (LEP), November 10, 1999.

OSHA Instruction CPL 02-00-025, Scheduling System for Programmed Inspections, January 4, 1995.

Cancellations: None

State Plan Impact: None

Action Offices: Englewood Area Office

Originating Office: Denver Regional Office

Contact: Assistant Regional Administrator for Federal State Operations
Cesar Chavez Memorial Building
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By and Under the Authority of:

Rita Lucero
Acting Regional Administrator, VIII

EXECUTIVE SUMMARY

Workers employed in the beverage manufacturing industry face many hazards that can lead to serious injury, illness, and death, including confined spaces, fall hazards, high noise levels, musculoskeletal hazards, and exposure to hazardous chemicals.

The intent of this Local Emphasis Program is to encourage employers to take steps to address hazards, ensure facilities are evaluated to determine if the employer is in compliance with all relevant OSHA requirements, and to help employers correct hazards, thereby reducing potential injuries, illnesses, and death for their workers.

The Englewood Area Office proposes to accomplish this through outreach and enforcement activities. Outreach activities will include letters to employers notifying them of the emphasis program, advising them of the hazards in their industry, and encouraging the use of OSHA consultation services. The Area Office will also issue a press release upon approval of this program, as well as publish information about the program in the regional compliance assistance newsletter. Enforcement activities will begin no earlier than three months after outreach is initiated and will include, but not be limited to, the inspection and review of beverage manufacturing operations, including all aspects of production operations and material handling activities; injury and illness records; and safety and health programs, to identify and obtain corrections of workplace hazards at all applicable inspection sites.

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I. Purpose. This Notice establishes and implements a LEP for programmed health and safety inspections of beverage making processes in general industry operations which may present safety and health hazards, including, but not limited, to confined space hazards, fall hazards, injury or illness from physical hazards (such as hearing loss and musculoskeletal disorders), and chemical exposure which is causing or likely to cause severe injury, permanent disability, or death.

II. Scope. This Notice applies to establishments within the Englewood Area Office jurisdiction in the NAICS Codes listed below:

NAICS	Description
312111	Soft Drink Manufacturing: this industry comprises establishments primarily engaged in manufacturing soft drinks and artificially carbonated waters.
312112	Bottled Water Manufacturing: this U.S. industry comprises establishments primarily engaged in purifying and bottling water (including naturally carbonated).
312113	Ice Manufacturing: this U.S. industry comprises establishments primarily engaged in manufacturing ice.
312120	Breweries: this industry comprises establishments primarily engaged in brewing beer, ale, malt liquors, and nonalcoholic beer.
312130	Wineries: this industry comprises establishments primarily engaged in one or more of the following: (1) growing grapes and manufacturing wines and brandies; (2) manufacturing wines and brandies from grapes and other fruits grown elsewhere; and (3) blending wines and brandies.
312140	Distilleries: this industry comprises establishments primarily engaged in one or more of the following: (1) distilling potable liquors (except brandies); (2) distilling and blending liquors; and (3) blending and mixing liquors and other ingredients.

III. Expiration. This Notice will expire September 30, 2019.

IV. Action. OSHA compliance personnel shall follow the procedures contained in this instruction when conducting outreach and enforcement activities.

V. References.

- A. OSHA Instruction CPL 04-00-001, Procedures for Approval of Local Emphasis Programs dated November 10, 1999.

- B. OSHA Instruction CPL 02-00-025, Scheduling System for Programmed Inspections, January 4, 1995.
- C. OSHA Instruction CPL 02-00-160, Field Operations Manual, August 2, 2016, or the most current version at the time of the opening conference.
- D. OSHA Instruction CPL 02-00-051, Enforcement Exemptions and Limitations under the Appropriations Act, May 28, 1998; Appendix A, April 25, 2018, or the most recent version at date of inspection opening conference.
- E. OSHA Instruction CSP 03-02-003, OSHA Strategic Partnership Program for Worker Safety and Health, November 6, 2013.
- F. October 18, 2002, OSHA Memorandum: Annual Evaluation of Local Emphasis Programs.
- G. November 12, 2014, OSHA Memorandum: Establishment – Targeting Lists for Emphasis Programs
- H. December 3, 2014 OSHA Memorandum: Procedures for Local and Regional Emphasis Programs
- I. OSHA CPL 03-00-008, National Emphasis Program – Combustible Dust 3/11/08
- J. April 29, 2013, OSHA Memorandum: Protecting the Safety and Health of Temporary Workers.
- K. NIOSH [2011]. Health hazard evaluation report: ergonomic and safety climate evaluation at a brewery – Colorado. By Ramsey J, Tapp L, Wiegand D. Cincinnati, OH: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, NIOSH HETA No. 2010-0008-3148.
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Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 2016-111.

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- Y. Wastradowski, Matt. “Brewery Safety: Common Violations and How to Stay Safe -- Occupational Health & Safety.” Occupational Health & Safety. July 18, 2016. Retrieved from <https://ohsonline.com/blogs/the-ohs-wire/2016/07/brewery-safety.aspx>, September 15, 2016.

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AA. International Labour Office. (n.d.). Encyclopedia of Occupational Health and Safety (4th ed.). "Chapter 65 – Beverage Industry" Canadian Centre for Occupational Health and Safety. Retrieved from <http://www.ilocis.org/documents/chpt65e.htm>, November 16, 2016.

VI. **Cancellation:** None

VII. **Action Office.** Englewood Area Office

VIII. **Background.** According to Bureau of Labor Statistics (BLS) data for 2014, employees in the beverage manufacturing industry (NAICS code 3121) experienced higher injury rates than the national average in several categories. Both injury and illness rates were at or close to double national averages, and reported hearing loss cases were five times the national average in private industry (national industry: 1.9 cases per 10,000 full-time workers; beverage manufacturing: 10.1 cases per 10,000 full-time workers). Furthermore, musculoskeletal disorders in the soft drink manufacturing industry occur at an average rate of 108.1 per 10,000 workers, well above the national average of 31.9 cases per 10,000 workers.

Since January 1, 2013, there have been 22 inspections in the state of Colorado associated with the NAICS codes identified in Section II, above. Sixteen of the inspections were related to complaints or referrals. Twelve inspections resulted in the issuance of 29 citations, 24 of which were cited after January 1, 2014. The rise in violations resulting from complaints over a period of less than 24 months indicates a potential area of concern when it comes to employee safety and health in the beverage manufacturing industry. Over half of the citations issued fall under five categories: Respiratory Protection, Hazard Communication, Control of Hazardous Energy, Medical Services and First Aid, and Personal Protective Equipment. However, since the citations resulted from partial-scope inspections, these hazards are not an accurate representation of the hazards employees may be exposed to while working in the beverage manufacturing industry.

A. **Hazards:** Employees in the beverage manufacturing industry are exposed to a variety of safety and health hazards. There are at least seven general hazards which are shared among the soft drink, brewery, winery, and distillery manufacturing industries: powered industrial trucks, ergonomic hazards from manual material handling, hazardous noise, lockout/tagout, process safety management, permit-required confined spaces, and exposure to toxic chemicals. Table 1, below, lists anticipated hazards by beverage manufacturing industry subcategory.

Powered industrial trucks and ergonomic hazards from manual material handling are common safety concerns when dealing with large packaging and shipping departments. This concern is supported by review of Bureau of Labor Statistics data. When injury rates are sorted by event or exposure, nearly every subcategory of the beverage manufacturing industry has a higher rate than the national average in the same two categories: transportation incidents (non-roadway), and overexertion and bodily reaction. The highest incidence rate of ergonomic-related injury was present in the soft drink manufacturing industry: the national rate of injury for overexertion and bodily reaction in 2014 was 33.3 per 10,000 full-time workers, but the incidence rate in the soft drink manufacturing industry was 111.5 per 10,000 full-time workers, over 335% higher than the national average.

Larger manufacturing facilities are likely to have more automated processes than smaller facilities. The presence of automatic machinery by necessity creates the need for a lockout-tagout program when repair or maintenance is needed. Automated machines also present safety hazards if not guarded adequately, and are a likely source for hazardous noise (International Labour Office, 2016). According to DOL data for most frequently cited OSHA standards by NAICS code, 15 inspections were conducted at soft drink manufacturing facilities between October 2015 and September 2016. Of those 15 inspections, four resulted in violations of the control of hazardous energy standard, making it the second most frequently cited standard. Nine inspections were conducted at breweries during the same time period. Control of hazardous energy was also the second most frequently cited violation, with four violations cited in two inspections. There were three inspections at wineries where control of hazardous energy was also the most frequently cited violation. Control of hazardous energy also appeared as a frequently cited violation in the other beverage manufacturing industries, though not as frequent as the previously mentioned industries. This is likely due to the small number of inspections conducted in the same time period (bottled water manufacturing--four inspections, one citation; distilleries--two inspections, one citation).

Storage or fermentation tanks have been cited in the past as permit-required confined spaces. Oregon's state OSHA program has issued hazard alerts to wineries and distilleries on the hazards of confined spaces (OROSHA, 2014). Carbon dioxide may be produced as a byproduct of the fermentation process, or may be added to drinks to induce carbonation. Carbon monoxide is produced as a byproduct of the reaction between residual sugar and extremely caustic cleaners such as sodium hydroxide or potassium hydroxide. If not monitored, employees could be exposed to hazardous concentrations of both carbon monoxide and carbon dioxide inside storage vats (International Labour Office, 2016).

The iconic copper stills involved in the distilling process are under high levels of heat and pressure, leading to a potential for explosion hazards if ethanol vapors are not vented properly. Vapors may be vented into an indoor environment,

creating an explosive or flammable environment. A study of distillery explosions concluded that explosions due to high levels of combustible vapors are rare, but explosions seem to be related to inadequately vented storage facilities. When distilled liquors are put into storage for years at a time, vapors may continually build until the saturation point is reached. Therefore, it is important that storage facilities are equipped with electrical wiring suitable for an explosive atmosphere (Ledin, 2003).

Chemical hazards are present at many beverage manufacturing facilities. Chlorine or ozone may be used to purify water at soft drink bottling plants before flavoring is added. Compressed ammonia gas is commonly used to refrigerate beverages after bottling. Larger facilities can potentially require enough ammonia to be subject to the Process Safety Management standard. Caustic materials like alkalines and acids are often used as cleaners, or to balance pH in the fermenting process. Wine makers use sulfur dioxide to kill undesired yeast strains before introducing their own. The fermentation process may also produce toxic byproducts such as carbon dioxide, ozone, and diacetyl (International Labour Office, 2016).

Distilleries receive dry malted or germinated barley and then grind it into coarse dust which carries flammable properties similar to flour dust. Processing of wheat and barley at breweries can create combustible dust, while ethanol is a product of the manufacturing process (Oregon Occupational Safety and Health Administration, 2014).

Table 1. Anticipated Hazards by Beverage Manufacturing (NAICS 3121) Subcategory.

Anticipated Hazard	Soda	Brewery	Winery	Distillery
PIT	X	X	X	X
Lockout/Tag Out	X	X	X	X
Ergonomics	X	X	X	X
PSM	X	X	X	
Noise	X	X	X	X
CS (CO2)		X	X	X
Chemical Exposure	X	X	X	

B. Industry Employment: The Colorado Department of Labor and Employment (CDLE) stated that 7,800 workers were employed in the beverage manufacturing industry in July, 2016. This was an increase of 40% from 2011, when only 5,500 workers were employed in the same industry.

Employment numbers among brewery sites can vary widely. Companies that distribute product nationwide may employ hundreds of workers for the brewing process alone. On the other hand, local craft beverage manufacturing companies are often smaller in scope. The Colorado Labor Market Information (LMI) Gateway lists 71 breweries located in areas under the Englewood Area Office’s jurisdiction, with employee numbers averaging between 10-19 people.

The Colorado Wine Industry Development Board reported that, in 2013, there were 120 wineries and vineyards in Colorado, employing 1665 workers. The Colorado LMI Gateway lists 26 wineries located in counties under the Englewood Area Office's jurisdiction. The average number of employees ranges from 5-9, but this number likely does not include temporary workers hired during harvest season.

While there are only seven soft drink bottling plants in the counties under Englewood Area Office's jurisdiction, according to the Colorado LMI Gateway, employment numbers at those plants can range from 20 to over 900 workers. This would account for a substantial percentage of the 7,800 workers employed in the beverage manufacturing industry as of July, 2016.

This issue aligns with the FY2018-2022, Strategic Goal 2.1 to secure safe and healthful working conditions for America's workers by focusing on health hazards which are known to increase risk of occupational illness in the workplace, such as chemical exposure, noise, and ergonomics.

This LEP is meant to increase the probability of inspecting such establishments within the jurisdictional boundaries of the Englewood Area Office which have not received a comprehensive OSHA inspection within the previous 60 calendar months of the creation of the current inspection cycle.

IX. Inspection Scheduling and Site Selection. The procedures and the site randomization protocols outlined in the November 12, 2014, OSHA Memorandum: Establishment – Targeting Lists for Emphasis Programs will be followed.

- A. Establishments that have received a comprehensive inspection within the previous 60 months of the creation of the current inspection cycle will be deleted from the list.
- B. The Area Office may delete an establishment if it is determined that:
 - 1. The establishment is a residence.
 - 2. The establishment is not in the scope of the LEP (e.g., the establishment is clearly conducting business other than that covered by the LEP).
 - 3. There is no evidence that the facility exists (e.g., no phone or internet listing; no registration with the Secretary of State; Google Earth or Street View shows conclusively that the business is non-existent).

The criteria used to delete any establishment must be fully documented by the Area Office.

- C. In the event a cycle is not completed on or before expiration of this Notice, the

cycle will be extended into the new fiscal year, provided this Notice is renewed. The outstanding cycle will be completed by the Area Office before establishments are selected from the new master list. If the Notice is not renewed, the outstanding cycle is effectively cancelled and the Area Office is not obligated to complete inspections on the remaining establishments within the cycle.

- X. **Inspection Procedures.** Inspections will be conducted in accordance with this Notice and the FOM.
- A. **Inspection Scope:** The scope of inspections will include a comprehensive review of any safety and health hazards in each establishment. This will include a review of all production areas of each establishment to include, but not be limited to, storage of raw materials, the manufacturing processes, chemical storage, packing and shipping areas, electrical equipment, storage areas, and quality control labs.
 - B. **Appropriations Act:** OSHA Instruction CPL 02-00-051, Exemptions and Limitations under the Current Appropriations Act, will be adhered to in implementation of this program.
 - C. **Unprogrammed Activity:** Reports of imminent danger, fatality/catastrophe, complaints, and referrals shall be scheduled as unprogrammed inspections and shall be inspected in accordance with the applicable provisions of the FOM. This does not, however, limit the Area Office's authority to conduct an inspection pursuant to this LEP. Non-formal complaints will be inspected pursuant to the provisions of the FOM.
- XI. **OIS Coding.** Inspections conducted under this LEP will be identified in the OSHA Information System (OIS). Current instructions for completing the appropriate inspection classification boxes on the OIS Inspection Form will be followed:
- A. The OIS Inspection Form for any programmed inspection scheduled under the procedures in this LEP shall be marked "Programmed Planned" in the Initiating Type block and the word "BEVERAGE" shall be recorded in the LEP block.
 - B. Inspections will be conducted in accordance with the FOM. The inspections shall be comprehensive and address both safety and health hazards.
 - C. Reports of imminent danger, fatality/catastrophe, complaints, and referrals shall be scheduled as unprogrammed inspections and shall be inspected in accordance with the applicable provisions of the FOM. This does not, however, limit the Area Office's authority to conduct an inspection pursuant to this LEP. If an unprogrammed inspection is initiated at a facility that falls under the criteria of this LEP, the inspection will be expanded to include a comprehensive inspection of the facility under this LEP, unless it has had a comprehensive inspection within the past 36 months.

- D. In the event a non-formal complaint is received by the Area Office involving a hazard associated with this Notice, the Area Office will refer to guidance set forth in the Field Operations Manual, Chapter 9: Complaint and Referral Process in determining whether the non-formal complaint warrants an inspection.
- E. The OIS Inspection Form for any unprogrammed inspection scheduled under the provisions of the FOM relating to formal complaints, referrals requiring inspection, imminent danger, and fatality/catastrophe investigations will be coded as normally required under the FOM. In addition, the designation of “BEVERAGE” will be recorded in the Local Emphasis Program block.
- F. Programmed Inspections under this LEP will be labeled as “Comprehensive” in OIS.
- G. Inspections will be coded either “safety” or “health” depending upon the nature of the hazards observed and the conditions reviewed at each establishment.

XII. Outreach. At least 90 days prior to commencing inspection activity under this LEP, the Regional and Area Office will conduct outreach activities intended to reach as many employers and stakeholders as is practicable. Outreach activities will be conducted to raise awareness of the hazards associated with beverage manufacturing, and to inform stakeholders and employers of the elements of the LEP. The Area Office will conduct mailings to stakeholders within the Area Office’s jurisdiction to raise awareness of the hazards associated with beverage manufacturing. The Area Office will encourage the stakeholders to participate in training, assist in the dissemination of information from this LEP, and participate in any other outreach activity where stakeholder participation would benefit the program. Stakeholders may include craft brewers, vineyards, wineries, manufacturer’s representatives, industry periodical publishers, safety and health consultants, safety councils, the Colorado Brewers’ Guild, the Colorado Brewers Association, the Colorado Distiller’s Guild, the Colorado Association for Viticulture and Enology, and the Colorado Wine Interest Development Board.

The U.S. DOL Office of Public Affairs will issue News Releases and public service announcements for any partnership agreements, or other significant outreach activity. The Regional Office will work with the Office of Public Affairs to develop an article with a description of this LEP for inclusion in industry publications.

XIII. Program Report: No later than October 31, 2019 the Area Office will provide a program report of this LEP to the Regional Office. The Regional Office will provide the National Office with one report of this LEP. At a minimum, the report should respond to the requirements of CPL 04-00-001, Section D, Appendix A, as well as the Directorate of Enforcement Programs memorandum dated October 18, 2002 for Annual Evaluations of Local Emphasis Programs (LEPs).

XIV. Distribution. Directorate of Enforcement Programs

Regional Office of the Solicitor

APPENDIX A

Dear Employer:

The Occupational Safety and Health Administration (OSHA) is developing a Local Emphasis Program (LEP) focusing on safety and health hazards related to beverage manufacturing in the following NAICS codes within the jurisdiction of the Englewood Area Office:

312111	Soft Drink Manufacturing
312112	Bottled Water Manufacturing
312113	Ice Manufacturing
312120	Breweries
312130	Wineries
312140	Distilleries

Workers engaged in the craft beverage manufacturing process may be exposed to significant hazards such as oxygen-deficient or explosive environments while working in permit-required confined spaces. Workers may be exposed to chemical hazards from working with caustic or acidic materials, and diacetyl. Workers may also be exposed to physical hazards such as ergonomic factors that contribute to work-related musculoskeletal diseases or hazardous noise from nearby machinery. Workers may also be exposed to safety hazards while performing material handling tasks such as operating powered industrial trucks and performing maintenance tasks on equipment that has not been de-energized.

Each of these hazards can affect the health of your employees. Exposure to diacetyl has been known to cause a severe obstructive lung disease commonly known as “popcorn lung.” Acidic and caustic materials can cause chemical injury. Safety hazards from powered industrial trucks and unguarded machinery can cause severe injury or death. Exposure to hazardous noise levels in the workplace may result in tinnitus and hearing loss.

The goal of this LEP is to reduce or eliminate harmful exposures to workers working in the beverage manufacturing industries. Manufacturing of craft beverages is a continuously growing industry, and we at the Englewood OSHA office want to ensure that your safety culture grows with your workplace.

As a result of this LEP, the Englewood OSHA office will be conducting enforcement inspections of workplaces involved in activities defined by any of the above-listed NAICS codes. We are notifying you of our intent to conduct these inspections because your company may be covered by this LEP.

OSHA continues to emphasize compliance assistance and to focus on prevention of occupational injuries and illnesses. OSHA has several guidance documents to assist employers in controlling exposures to hazardous chemicals and noise.

The following documents and websites may be of assistance in evaluating and controlling these hazards:

- <https://www.osha.gov/SLTC/confinedspaces/> OSHA's Safety and Health Topics Page for Confined Spaces in General Industry
- https://www.osha.gov/OshDoc/data_General_Facts/OSHAcombustibledust.pdf OSHA Hazard Alert: Combustible Dust Explosions
- <https://www.osha.gov/SLTC/hazardoustoxicsubstances/> OSHA's Safety and Health Topics Page for Chemical Hazards and Toxic Substances
- <https://www.osha.gov/SLTC/noisehearingconservation/> OSHA's Safety and Health Topics Page for Occupational Noise Exposure
- <https://www.osha.gov/SLTC/ergonomics/> OSHA's Safety and Health Topics Page for Ergonomics
- <https://www.osha.gov/Publications/osha2236.pdf> OSHA Publication 2236: Materials Handling and Storage
- <https://www.osha.gov/SLTC/etools/pit/index.html> OSHA's Powered Industrial Trucks (Forklifts) eTool
- <https://www.osha.gov/SLTC/compressedgasequipment/> OSHA's Safety and Health Topics Page for Compressed Gas and Equipment
- <https://www.osha.gov/SLTC/flavoringlung/index.html> OSHA's Safety and Health Topics Page for Flavorings-Related Lung Disease

In addition to protecting employees from potential exposure to hazardous chemicals and noise, OSHA strongly encourages all employers to develop a comprehensive safety and health program to identify and control all other potential hazards at the work site. You can find information on this topic at the following website address:

<https://www.osha.gov/shpguidelines/> .

OSHA's On-site Consultation Program offers free and confidential safety and occupational health advice to small and medium-sized businesses in all states across the country, with priority given to high-hazard worksites. On-site Consultation services are separate from enforcement and do not result in penalties or citations. To find out more about OSHA's Consultation Program, visit the [web page](#) or call (970) 491-6151.

Health & Safety Consultation Department of Environmental and Radiological Health Services

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<http://www.osha.gov/dcsp/smallbusiness/consult.html>.

NOTICE: This is an OSHA ARCHIVE Document, and may no longer represent OSHA policy.

If you have questions about any of the referenced resources or need assistance locating additional information on the OSHA web site, please feel free to contact our office at (303) 843-4500.

Your commitment to employee safety and health is appreciated.
Sincerely,

David Nelson
Area Director, Englewood Area Office