



OSHA Regional Instruction

U.S. DEPARTMENT OF LABOR

Occupational Safety and Health Administration

DIRECTIVE NUMBER: 21-05 (CPL 04) | **EFFECTIVE DATE:** December 31, 2021

SUBJECT: Local Emphasis Program for Inspections in the Grain Handling Industry

REGIONAL IDENTIFIER: Region 10

ABSTRACT

Purpose: This instruction renews the policies and procedures to be followed when conducting local emphasis program inspections of the grain handling facilities within the Boise Area Office jurisdiction.

Scope: This instruction applies to all inspections under federal OSHA jurisdiction in Idaho where grain handling operations are occurring.

References: OSHA Instruction CPL 04-00-002, Procedures for Approval of Local Emphasis Programs, dated November 13, 2018.

OSHA Memorandum for Regional Administrators, Subject: "Establishment-Targeting Lists for Emphasis Programs", dated November 12, 2014.

OSHA Memorandum for Regional Administrators, Subject: "Procedures for Local and Regional Emphasis Programs", dated December 3, 2014.

OSHA Instruction CPL 02-00-051, Exemptions and Limitations under the Current Appropriations Act, dated May 28, 1998.

OSHA Instruction CPL 02-00-164, Field Operations Manual, dated April 4, 2020.

OSHA Instruction CPL 02-01-004, Inspection of Grain Handling Facilities, 29 CFR 1910.272, dated November 8, 1996.

OSHA Instruction CPL 03-00-008, Combustible Dust National Emphasis Program (Reissued), dated March 11, 2008.

National Institute for Occupational Safety and Health (NIOSH)
Publication No. 83-126, Occupational Safety in Grain Elevators and
Feed Mills (1983).

NIOSH Publication 88-102, Preventing Entrapment and Suffocation
Caused by the Unstable Surfaces of Stored Grain and Other Materials
(1987).

NIOSH Publication 95-109, Safe Grain and Silage Handling (1995).

Cancellation: OSHA Regional Instruction 19-10 (CPL 04), dated December 31, 2018.

Expiration Date: This instruction will expire December 31, 2026, but may be renewed.

State Plan Impact: None.

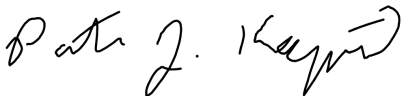
Significant Changes: None.

Action Offices: Boise Area Office and the Office of Enforcement Programs.

Originating Office: Office of Enforcement Programs

Contact: Assistant Regional Administrator
Office of Enforcement Programs

By and Under the Authority of:



Patrick J. Kapust
Acting Regional Administrator

Executive Summary

This instruction renews a Local Emphasis Program (LEP) to address serious and recognized hazards in the grain handling industry, including General Industry (29 CFR 1910).

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I. Purpose.

This instruction renews a local emphasis program (LEP) designed to reduce injury, illness, and death rates in the grain handling industry by increasing employers' knowledge in safety and health and promoting safety and health programs through a combination of compliance assistance and enforcement activities.

II. Scope.

This instruction applies to general industry establishments that are covered by 29 CFR 1910.272 within the jurisdictional boundaries of the Boise Area Office. This LEP establishes OSHA's procedure for programmed comprehensive safety inspections of establishments in Standard Industrial Classification (SIC)/North American Industry Classification System (NAICS) codes 2041/311211 (flour mill products), 2044/311212 (rice milling), 2048/311119 (prepared feed for animals and fowls), 5153/424510 (grain and field bean merchant wholesalers) and 4221/493130 (grain and field beans warehousing and storage), for any grain handling or storage related activities performed at the establishment, pursuant to the provisions contained in the Field Operations Manual.

III. Action Offices.

Boise Area Office and the Office of Enforcement Programs.

IV. References:

OSHA Instruction CPL 04-00-002, Procedures for Approval of Local Emphasis Programs, dated November 13, 2018.

OSHA Memorandum for Regional Administrators, Subject: "Establishment-Targeting Lists for Emphasis Programs", dated November 12, 2014.

OSHA Memorandum for Regional Administrators, Subject: "Procedures for Local and Regional Emphasis Programs", dated December 3, 2014.

OSHA Instruction CPL 02-00-051, Exemptions and Limitations under the Current Appropriations Act, dated May 28, 1998.

OSHA Instruction CPL 02-00-164, Field Operations Manual, dated April 4, 2020.

OSHA Instruction CPL 02-01-004, Inspection of Grain Handling Facilities, 29 CFR 1910.272, dated November 8, 1996.

OSHA Instruction CPL 03-00-008, Combustible Dust National Emphasis Program (Reissued), dated March 11, 2008.

National Institute for Occupational Safety and Health (NIOSH) Publication No. 83-126, Occupational Safety in Grain Elevators and Feed Mills (1983).

NIOSH Publication 88-102, Preventing Entrapment and Suffocation Caused by the Unstable Surfaces of Stored Grain and Other Materials (1987).

NIOSH Publication 95-109, Safe Grain and Silage Handling (1995)

V. Cancellations.

OSHA Regional Instruction 19-10 (CPL 04), December 31, 2018.

VI. Expiration.

This instruction will expire December 31, 2026, but may be renewed.

VII. Background.

This LEP supports the Occupational Safety and Health Administration (OSHA) Fiscal Year (FY) 2022 Agency Management Plan (AMP), Agency Theme 1, Assure Safe and Healthful Workplaces, to secure safe and health workplaces, including the agency's theme to protect the most vulnerable workers in high hazard industries, by targeting industries with higher than average illness and injury rates. This LEP also supports OSHA's Fiscal Year 2022 AMP, Agency Theme 3, Target Enforcement, Compliance Assistance, and Training Resources to Essential Worksites in the grain handling industry.

A large portion of Idaho's industry is associated with agriculture, including the handling and processing of grains, such as wheat, barley and corn.

The hazards associated with grain handling are well recognized. Employees are exposed to the potential of fires and explosions, and other significant hazards such as falls, machine guarding, hazardous energies, amputations, rail car handling operations, and grain bin entry engulfment and hazardous atmospheres.

The Boise Area Office has determined that an OSHA enforcement presence is warranted due to continuing incidences of fatalities and injuries in these facilities. Nationally, OSHA has also determined a renewed focus on grain industries is necessary by including the grain handling industry in the OSHA FY 2022 AMP as an essential worksite targeted industry.

Suffocation can occur when a worker becomes buried (engulfed) by grain as they walk on moving grain or attempt to clear grain build up on the inside of a bin. Moving grain acts like "quicksand" and can bury a worker in seconds. The behavior and weight of the grain make it extremely difficult for a worker to get out of it without assistance. Suffocation is a leading cause of death in grain storage bins. In fact, the number of deaths more than doubled between 2006 and 2010. In 2010, 51 workers were engulfed by grain stored in

bins, and 26 died – the highest number on record, according to a report issued by Purdue University. During the week of June 6, 2011, three workers, one each in Iowa, Michigan and North Dakota, were killed when they were engulfed by grain while on the job. In Texas, a fourth worker was also buried in grain, but was rescued and survived. In March 2010, a grain elevator worker suffocated when engulfed by barley grain in eastern Idaho.

Grain dust explosions are often severe, involving loss of life and substantial property damage. Over the last 35 years, there have been over 500 explosions in grain handling facilities across the United States, which have killed more than 180 people and injured more than 675. Grain dust is the main source of fuel for explosions in grain handling. Grain dust is highly combustible and can burn or explode if enough becomes airborne or accumulates on a surface and finds an ignition source (such as hot bearing, overheated motor, misaligned conveyor belt, welding, cutting, and brazing). OSHA standards require that both grain dust and ignition sources must be controlled in grain elevators to prevent these often deadly explosions. In May of 2021, a grain dust explosion occurred at a large storage facility near Mountain Home, ID. This explosion cause significant equipment damage and sent one worker to the burn unit.

Falls from height can occur from many walking/working surfaces throughout a grain handling facility. Examples of such surfaces include (but are not limited to) floors, machinery, structures, roofs, skylights, unguarded holes, wall and floor openings, ladders, unguarded catwalks, platforms and man lifts. Falls can also occur as workers move from the vertical exterior ladders on grain bins to the bin roof or through a bin entrance. Mechanical equipment within grain storage structures, such as augers and conveyors, present serious entanglement and amputation hazards. Workers can easily get their limbs caught in improperly guarded moving parts of such mechanical equipment. Storage structures can also develop hazardous atmospheres due to gases given off from spoiling grain or fumigation. Workers may be exposed to unhealthy levels of airborne contaminants, including molds, chemical fumigants (toxic chemicals), and gases associated with decaying and fermenting silage. Fumigants are commonly used for insect control on stored grain and many have inadequate warning properties. Exposure to fumigants may cause permanent central nervous system damage, heart and vascular disease, and lung edema as well as cancer. Although fumigant application is enforced by the Environment Protection Agency, these gases may result in a worker passing out and falling into the grain, thus becoming engulfed and suffocating or otherwise injuring themselves.

VIII. Program Procedures.

The following procedures will be utilized to implement enforcement activity. The Regional Administrator, through the Assistant Regional Administrator for Enforcement Programs, and the Boise Area Director shall ensure that the procedures outlined in this instruction are followed and adhered to in the scheduling of programmed inspections of grain handling facilities.

A. Outreach Program

This LEP has been in place for years and outreach is a continual effort through programs such as Safety Fests and meetings with local industry organizations. The

Boise Area Office will provide updated information to employers on topics such as the OSHA standards that apply to grain handling, how to implement a safety and health program, and details about the LEP. OSHA has an alliance with the National Grain and Feed Association, and the Boise Area Office continues to work with the local Pacific Northwest chapter, PNWGFA (Pacific Northwest Grain & Feed Association), to provide information and training.

B. Programmed LEP Inspections

Inspections conducted under this program shall be scheduled and conducted pursuant to the following criteria. Inspections shall concentrate on grain handling establishments as defined by 29 CFR 1910.272(b).

Following is a list of sources for obtaining information to develop a roster from which inspections will be conducted.

1. Industry Selection

The following SIC/NAICS codes list the industries within the state of Idaho that are covered by 29 CFR 1910.272: Standard Industrial Classification (SIC)/North American Industry Classification System (NAICS) codes 2041/311211 (flour mill products), 2044/311212 (rice milling), 2048/311119 (prepared feed for animals and fowls), 5153/424510 (grain and field bean merchant wholesalers) and 4221/493130 (grain and field beans warehousing and storage).

2. Site Selection.

a. Master List Generation

A listing of establishments within the above SIC/NAICS codes will be provided by OSHA's Office of Statistics based on Dunn & Bradstreet information for the office's area of jurisdiction. Establishments included on the OSHA National Office mailing list for grain facilities will be added to the listing of establishments.

NOTE: Small employers with ten or fewer employees in any NAICS code listed in OSHA Instruction CPL 02-00-051 as exempt from programmed OSHA safety inspections will not be inspected. Area office staff will consult the appropriation riders (CPL 02-00-051) each fiscal year for exempt employers in any given NAICS. However, other establishments with fewer than ten employees are to be included in this program.

b. Deletions

The area office may delete from their list any facility/site that meets the applicable deletion criteria listed in CPL 02-00-025, Scheduling System for Programmed Inspections. The area offices may also delete any establishment that has had an inspection where exposures to grain handling hazards have been fully evaluated within the current year or any establishment where during the previous three (3) fiscal years no serious violations were cited or a subsequent inspection documented

employer efforts to abate all serious hazards. In the event an establishment meeting these criteria is not deleted, the decision shall be documented and the reasons for including it shall be stated.

c. Cycle Generation

A random number table will be applied to create the first inspection cycle of three or more establishments. Subsequent cycles will be created in the same way until the expiration of the LEP or until all establishments on the list have been assigned to a cycle. Whenever the area office becomes aware of a previously unknown establishment in one of the identified SIC/NAICS, that establishment shall be added to the master list for inclusion in the next inspection cycle.

C. Complaints, Referrals and Fatalities/Catastrophes

Complaint, referral, fatality, catastrophe and follow-up inspections will be handled according to the Field Operations Manual (FOM). Un-programmed inspections of establishments identified will be expanded to include the issues addressed by this program. An inspection scheduled under this LEP does not necessarily need to be inspected by the compliance personnel making the original observation. Every complaint or referral for any operation where there exists the potential for serious hazards associated with grain handling must be handled as follows:

1. Based upon the information provided, all potential grain handling related establishments brought to the attention of the area office must be handled in accordance with the procedures outlined in the FOM. The Area Director may initiate a referral or complaint inspection based on the information provided.
2. Whenever a Compliance Safety and Health Officer (CSHO) observes or receives information of work operations where the potential for grain handling related hazards exists, the CSHO must follow the procedures below. The procedures apply whether or not a violation is observed, and also apply when information is received through phone calls alleging a hazard, referrals (including media or other agency referrals), reports from other staff, from the general public, etc.
 - a. Document the status and condition of the work operation as far as they are known, noting any serious hazard(s). Documentation must be maintained by the area office in case of denial of entry.
 - b. Note the location of the work site and the name and address of the employer(s) performing the operation.
 - c. Provide the Assistant Area Director or Area Director with the information. Based upon the information provided, all potential grain handling related work sites will be handled in accordance with existing agency procedures for referrals and for employee complaints.

IX. Inspection Procedures.

- A. Inspections will be conducted in accordance with CPL 02-00-051, Enforcement Exemption and Limitations under the Appropriation Act, and shall be conducted in accordance with provisions of the FOM.
- B. All inspections will comply with guidelines established in OSHA Instruction CPL 02-01-004, Inspection of Grain Handling Facilities, and will include an evaluation of the employer's efforts at adopting protective measures and its efforts toward the abatement of hazards relating to grain handling, especially combustible dust, engulfment hazards, amputations, machine guarding and lockout related hazards.
- C. Unprogrammed events such as fatalities, catastrophes, complaints, follow-up inspections and referrals shall be scheduled for inspection in accordance with existing procedures outlined in the FOM. When possible, a single inspection will be conducted to address the unprogrammed event as well as to conduct an inspection described in this program for establishments selected.
- D. When an inspection is not conducted because the employer has refused entry, a warrant shall be sought in accordance with procedures in the FOM.
- E. CSHOs will evaluate combustible dust related hazards and collect samples for analysis in accordance with the Combustible Dust National Emphasis Program, OSHA Instruction CPL 03-00-008.

X. CSHO Training and Protection.

- A. CSHOs are required to wear appropriate PPE and avoid fall, machine guarding, and other hazards.
- B. CSHOs shall attempt to avoid entering grain bins to collect evidence unless absolutely necessary, and shall NEVER enter grain storage bins that pose an engulfment hazard or potential atmospheric hazard. CSHOs will contact their AD or AAD to consult with them prior to entering any bins or confined spaces.
- C. When inspecting grain handling related activities under this LEP, whenever possible at least one CSHO assigned should have received the OSHA Training Institute (OTI) Grain Handling course or equivalent training and experience.
- D. Safe collection of dusts for lab analysis shall be collected and shipped in accordance with the instructions in the *Combustible Dust National Emphasis Program*, OSHA Instruction CPL 03-00-008.

XI. Program Evaluation.

- A. The Area Director will be asked to provide input concerning special problems that may have surfaced during the year; recommendations to improve the LEP; and recommendations to renew or not renew the LEP.

- B. The Office of Enforcement Programs shall review the input and prepare an evaluation to be submitted to the Regional Administrator for review at the midpoint, and at the completion of the program.

XII. OIS Recording.

- A. Inspections conducted under this program shall be coded as “Programmed Planned” with the LEP designation “GRAIN.” Unprogrammed inspections (i.e. Complaints, Referrals from Outside OSHA, Fatalities/Catastrophes, Employer reported hospitalization or amputation) shall also be classified as “Unprogrammed” and coded under this local emphasis program designation of “GRAIN.”
- B. Inspections, unprogrammed activities and compliance assistance activities that are targeted as a result of this LEP will be coded as “GRAIN.”
- C. Where hazards associated with combustible dusts are investigated, enter the NEP code “DUSTEXPL.”