Grain Handling Standard (29CFR 1910.272) Audit

The Occupational Safety and Health Administration's Grain Handling Standard, 29CFR 1910.272, forms the heart of the safety standards grain elevator and feed mill operators must follow in providing a safe workplace for employees. On the next four pages, you'll find a self-audit checklist you can use to make sure you're in compliance with every detail of the standard.

Section (d) Emergency Action Plan

1) Has an emergency action plan that complies with the requirements of 1910.38 (a) been developed and implemented? Yes ___ No ___ NA ___

Section (e) Training

1) Is appropriate job training provided to employees at least annually? Yes ___ No ___ NA ___
2) Is training provided when changes in job assignment will expose employees to new hazards? Yes ___ No ___ NA ___
3) Are current employees, prior to starting work, trained in at least the following: Yes ___ No ___ NA ___
   (a) General safety precautions associated with the facility? Yes ___ No ___ NA ___
   (b) Preventive measures for the hazards related to dust accumulations and common ignition sources? Yes ___ No ___ NA ___
   (c) Procedures and safety practices applicable to their job tasks, such as choked legs, hot work, preventive maintenance, lockout/tagout, etc.? Yes ___ No ___ NA ___
   (d) Special assignments, such as bin entry and handling flammable or toxic substances? Yes ___ No ___ NA ___

Section (f) Hot Work Permit

1) Is a hot work permit required in all situations other than the three exceptions stated below? Yes ___ No ___ NA ___
   *When the person who would normally issue the permit is present while the hot work is being performed.
   *In welding shops authorized by the employer.
   *In hot work areas authorized by the employer that are located outside of the grain handling structure.
2) Does the hot work permit certify that all of the requirements of 1910.252 (a) have been implemented before hot work operations begin? Yes ___ No ___ NA ___

Section (g) Entry into Grain Handling Structures

Note: Section (g) applies to entry into bins, silos, tanks, and other grain storage structures. Entry through unrestricted ground level openings into flat storage structures in which there are no toxicity, flammability, oxygen-deficiency, or other atmospheric hazards is covered by Section (h) Entry Into Flat Storage Structures.

1) Is a written permit issued for entry? Yes ___ No ___ NA ___
   Exception: A written permit is not required if the employer or his designated representative is present during entry operations.
2) Does the permit certify that the precautions contained in this section (Section (g)) have been implemented prior to entry? Yes ___ No ___ NA ___
3) Is all equipment (mechanical, electrical, etc.) that presents a danger to an entrant deenergized or isolated in a manner (such as lockout/tagout, disconnection, or blocking) that effectively protects an entrant? Yes ___ No ___ NA ___
4) Is the internal atmosphere in the space tested for the presence of combustible gases, vapors, and toxic agents when the employer has reason to believe they may be present? Yes ___ No ___ NA ___
5) Is the internal atmosphere in the space tested for oxygen content unless there is continuous natural air movement or continuous forced-air ventilation before and during entry? Yes ___ No ___ NA ___

6) If the oxygen level is less than 19.5%, or if combustible gas or vapor is detected in excess of 10% of the lower flammable limit, or if toxic agents are present in excess of the ceiling values listed in Subpart Z, of 29CFR Part 1910, or if toxic agents are present in concentrations that will cause health effects that prevent entrants from effecting self-rescue or communication to obtain assistance, do the following procedures apply:
(a) Ventilation is provided until the unsafe condition(s) are eliminated, and the ventilation is continued as long as there is a possibility of a recurrence of the unsafe condition(s) while the space is occupied? Yes ___ No ___ NA ___
(b) The entrant wears an appropriate respirator if the toxicity or oxygen deficiency cannot be eliminated? Yes ___ No ___ NA ___
(c) Respirator use is in accordance with the requirements of 29CFR 1910.134? Yes ___ No ___ NA ___

7) Is the practice of "walking down grain" strictly prohibited? Yes ___ No ___ NA ___

8) Is a lifeline with a body harness or a boatswain's chair used under the following two conditions:
(a) Whenever entry is made at or above the level of stored grain? Yes ___ No ___ NA ___
(b) Whenever an entrant walks or stands on or in grain that is deep enough to pose an engulfment hazard? Yes ___ No ___ NA ___

9) Is the lifeline so positioned and of sufficient length to prevent an entrant from sinking further than waist-deep in the grain? Yes ___ No ___ NA ___
Exception: Where the employer can demonstrate that the protection required by (8) (a),(8) (b), and (9) above is not feasible or creates a greater hazard, the employer is required to provide an alternative means of protection that will prevent an entrant from sinking further than waist-deep in the grain.
Note: When an entrant is standing or walking on a surface that the employer demonstrates is free from engulfment hazards, the lifeline or alternative means may be disconnected or removed.

10) Is an observer, equipped to provide assistance, stationed outside the space while entry operations are underway? Yes ___ No ___ NA ___

11) Are communications (visual, voice, or signal line) always maintained between the entrant and the observer? Yes ___ No ___ NA ___

12) Is rescue equipment that is specifically suited for the space being entered provided and in good condition? Yes ___ No ___ NA ___

13) Is the entry observer trained in rescue procedures and notification methods for obtaining additional assistance? Yes ___ No ___ NA ___

14) Are entrants prohibited from entering a space underneath a bridging condition or where a buildup of grain on the sides could fall and bury them? Yes ___ No ___ NA ___

Section (h) Entry into Flat Storage Structures

1) Are entrants who walk or stand on or in grain that is deep enough to pose an engulfment hazard equipped with a lifeline or some alternative means that will prevent the entrant from sinking further than waist-deep in the grain? Yes ___ No ___ NA ___
Note: When the employee is walking or standing on a surface that the employer demonstrates is free from engulfment hazards, the lifeline or alternative means may be disconnected or removed.

2) Whenever an entrant walks or stands on or in grain that is deep enough to pose an engulfment hazard, is all equipment that presents a danger to entrants (such as as auger or other grain transport equipment) deenergized or otherwise isolated by such means as lockout/tagout, disconnection, blocking, etc.? Yes ___ No ___ NA ___

3) Is the practice of "walking down grain" strictly prohibited? Yes ___ No ___ NA ___

4) Are entrants prohibited from being underneath a bridging condition, or in any location where an accumulation of grain on the sides could fall and engulf them? Yes ___ No ___ NA ___

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Section (i) Contractors

1) Are outside contractors informed of the following:
   (a) The known potential fire and explosion hazards related to the contractor's work and work area? Yes ___ No ___ NA ___
   (b) The applicable safety rules of the facility? Yes ___ No ___ NA ___
2) Are the applicable provisions of the facility emergency action plan explained to the outside contractor? Yes ___ No ___ NA ___

Section (j) Housekeeping

1) Has a written housekeeping plan been developed and implemented? Yes ___ No ___ NA ___
2) Have priority housekeeping areas been identified in the written housekeeping plan? Yes ___ No ___ NA ___
   Note: Priority housekeeping areas must include at least the following:
   (a) Floor areas within 35 feet of inside bucket elevators.
   (b) Floors of enclosed areas containing grinding equipment.
   (c) Floors of enclosed areas containing grain dryers located inside the facility.
3) Are grain dust accumulations that exceed 1/8 inch in priority housekeeping areas removed immediately or, in lieu of removal, is equivalent protection provided? Yes ___ No ___ NA ___
4) If compressed air is used for cleaning, are all known ignition sources in the area shut down, removed, or isolated in some manner? Yes ___ No ___ NA ___
5) Does the written housekeeping program include procedures for the removal of grain and product spills? Yes ___ No ___ NA ___

Section (k) Grate Openings

1) Is the width of receiving pit grate openings (truck or rail) a maximum of 2-1/2 inches? Yes ___ No ___ NA ___

Section (l) Filter Collectors

1) Are filter collectors equipped with a monitoring device that will indicate a pressure drop across the surface of the filter? Yes ___ No ___ NA ___
2) Are filter collectors installed after March 30, 1988, located as follows:
   (a) Outside the facility. Yes ___ No ___ NA ___
   (b) Located inside the facility and protected by an explosion suppression system. Yes ___ No ___ NA ___
   (c) Located in an area inside the facility that is separated from other areas of the facility by construction having a one-hour fire-resistance rating and that is adjacent to an exterior wall and vented to the outside? Yes ___ No ___ NA ___

Section (m) Preventive Maintenance

1) Are regularly scheduled inspections of the mechanical and safety control equipment associated with dryers, grain stream processing equipment, dust collection equipment including filter collectors, and bucket elevators performed? Yes ___ No ___ NA ___
2) Is lubrication and other maintenance in accordance with the manufacturers' recommendations, or as determined by prior operating experience? Yes ___ No ___ NA ___
3) Is malfunctioning equipment, such as dust collection systems, overheated bearings, or slipping or misaligned belts on inside bucket elevators, promptly repaired or removed from service?
4) Is a certification record maintained of each preventive maintenance inspection? Yes ___ No ___ NA ___
5) Have lockout/tagout procedures been developed and implemented in accordance with the requirements of 29CFR 1910.147? Yes ___ No ___ NA ___

Section (n) Grain Stream Processing Equipment

1) Is grain stream processing equipment, such as hammermills, grinders, and pulverizers equipped with an effective means of removing ferrous material from incoming grain? Yes ___ No ___ NA ___

Section (o) Emergency Escape

Note: Applies only to grain elevators.

1) Are there at least two means of emergency escape from galleries (bin decks)? Yes ___ No ___ NA ___
2) Are tunnels in grain elevators that were in existence before March 30, 1988, provided with at least one means of emergency escape? Yes ___ No ___ NA ___
3) Are tunnels in grain elevators that were constructed after March 30, 1988, provided with at least two means of emergency escape? Yes ___ No ___ NA ___

Section (p) Continuous-Flow Bulk Grain Dryers

Note: Applies only to grain elevators.

1) Are grain dryers equipped with automatic controls that will accomplish the following:
   (a) Shut off the fuel in case of flame failure or interruption of air movement through the exhaust fan? Yes ___ No ___ NA ___
   (b) Will stop the grain from being fed into the dryer if excessive temperature occurs in the exhaust of the drying section? Yes ___ No ___ NA ___
2) Do grain dryers installed after March 30, 1988, comply with either (a), (b), or (c) below:
   (a) Grain dryers are located outside the facility? Yes ___ No ___ NA ___
   (b) Grain dryers are located inside the facility and protected by a fire or explosion suppression system? Yes ___ No ___ NA ___
   (c) Grain dryers are located inside the facility and in an area that is separated from other areas by construction having at least a one-hour fire-resistance rating? Yes ___ No ___ NA ___

Section (q) Inside Bucket Elevators

Note: Applies only to grain elevators.

1) Does the facility have procedures that stipulate that bucket elevators shall not be "jogged" to free a choked leg? Yes ___ No ___ NA ___
2) Are belts and lagging purchased after March 30, 1988, conductive? Yes ___ No ___ NA ___
3) Are bucket elevators equipped with a means of access to the head section to allow for inspection of the head pulley, lagging, belt, and discharge throat of the elevator head? Yes ___ No ___ NA ___
4) Is the boot section of bucket elevators equipped with a means of access for clean-out of the boot and for inspection of the boot, pulley, and belt? Yes ___ No ___ NA ___
5) Are leg bearings mounted externally to the leg casing? Yes ___ No ___ NA ___
6) Are those bearings not mounted externally to the leg casing provided with vibration monitoring, temperature monitoring, or other means to monitor their condition? Yes ___ No ___ NA ___
7) Are bucket elevators equipped with a motion sensing device that will shut down the leg when the belt speed is reduced by no more than 20% of the normal operating speed? Yes ___ No ___ NA ___
8) Are bucket elevators equipped with a belt alignment device that will initiate an alarm when the belt is not tracking properly, or equipped with a means that provides constant belt alignment? Yes ___ No ___ NA ___

Note: Audit items (7) and (8) above do not apply to grain elevators having a permanent storage capacity of less than one million bushels, provided that daily visual inspection is made of the bucket movement and tracking of the belt. Audit items (5), (6), (7), and (8) do not apply to bucket elevators that are equipped with any system that will keep the dust concentrations inside the leg at least 25% below the lower flammable limit at all times during operation.

Prepared by Adam Schupp, safety consultant; N. Fort Myers, FL; 941-731-5947.