

## POSITION DESCRIPTION

Grain Weighing Technician – Superior Grain Inspection Unit

Division of Trade & Consumer Protection – Bureau of Business Trade Practices

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### **POSITION SUMMARY**

This position performs responsible work in the Grain Inspection Program, including technical weighing duties, sampling of grain carriers, and preparing samples for inspection. Supervision is of a limited nature at the direction of the designated lead worker at the elevator site, the Grain Operations Manager and/or the Assistant Grain Operations Manager.

**65% GOAL A: Observance of scale operation duties and responsibilities to assure that the printed or certified weight on the scale ticket or tape is the true and accurate weight of the lot of grain being weighed. Weights printed on tickets or tapes represent lots of grain ranging from 600 to 1,000,000 bushels of grain, and are used as supporting data to issue official weight certificates. The official weight certificates, in conjunction with the inspection certificates, are used for price establishment by domestic and international grain dealers. IMPACT: Proper supervision of elevator weighing practices assures that all official weights obtained are accurate and both buyers and sellers of grain receive fair payment on the quantity of grain offered for weighing.**

- A.1 Monitor the elevator weighing operation of the scales, consoles, printers, and the operators' handling of the scale tickets or tapes to assure correct procedures are being used which will produce accurate weights.
- A.2 Perform periodic checks of scale system to assure accurate weights are being obtained and to identify scale malfunctions. Checks are made to assure upper garner and weigh hopper gates of hopper scales are opening and closing properly and have no leakage. Gates not closing properly or which have leakage do not allow scale system to accurately weigh a captured quantity. Scales must also be periodically zero balanced to assure no grain is being left in or on the weighing device, which could cause inaccuracies. When scale malfunctions are recognized, official weighing is withheld until after elevator personnel have been notified and the problem corrected.
- A.3 Compare weight values printed on digital display panels with the weight values printed on scale tickets or tapes, properly initialing them to verify their accuracy. Visual readings of digital displays are used to verify their accuracy and legibility of the printing device which prints the weight on tickets or tapes. Visually verified and documented display weights can be used to adjust weight amounts incorrectly printed on a scale ticket or tape.
- A.4 Receive pertinent data from fellow technicians performing other weighing duties (see Goal B) and document it on the proper forms. Information such as spills, carrier ID information, seal records, etc., must be recorded on the correct weighing form to document that correct procedures have been used to obtain accurate weights.
- A.5 Document accurately all information or problems related to A1-A4 on weight loading logs, scale tickets and tapes or grain weight by carrier reports, submitting them in a timely manner to the main office. These records are the supporting data for the official weight certificates which must be timely and accurately issued for the reason they are used monetarily as prima facie evidence in grain marketing trading.

**20% GOAL B: Inspection of grain carriers, grain identification equipment and grain flow equipment to assure that all grain delivered and weighed is accurately accounted for. IMPACT: Carrier or elevator leaks or spills caused by grain flow equipment malfunction can result in significant**

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**economic loss to either the buyer, the seller, and/or the handler. Improper carrier identification put on weight tickets or tapes can also cause significant economic loss to interested parties.**

- B.1 Inspect outbound carriers such as trucks, rail cars, and ships prior to loading, checking storage area for grain or residue of previous cargo, holes in carrier sides or walls, open slides, etc., which could alter the weight of grain after being stowed in the carrier.
- B.2 Observe, identify, and document the ship cargo holds where weighed grain is being stowed to assure that the lot of grain can be properly identified as to stowage areas on the weight certificates.
- B.3 Monitor outbound carriers during and after loading to assure all grain delivered to carrier has been properly stowed or if spilled on the carrier deck, it is properly adjusted for, thus assuring all grain is credited to buyer and/or seller.
- B.4 Monitor all diversion points in the outbound grain flow such as turnheads\*, spouts\*, etc., for leaks and/or spills and apply seals\* (seals assure no improper diversion of grain) where necessary to assure grain is not diverted after weighing and that all spills, leaks, and unusual conditions can be documented and adjusted for.
- B.5 Inspect inbound railroad cars, recording the seal numbers and/or seal status, car initials and numbers, and information as to leaks, spills, etc., to determine weight adjustments in case of complaints and to verify the carrier initials and numbers printed on weight tickets or tapes.
- B.6 Inspect carriers after unloading to determine that all grain has been removed, thus ensuring that all grain has been credited to the buyer and/or seller.
- B.7 Inspect vehicle scale and/or railroad track scale for excessive build-up of grain or debris on scale platforms, in scale pits and ground levels of scale load cells and other conditions that might adversely affect accurate weights.
- B.8 Monitor all diversion points and pits, boots, legs, etc., (diversion points are those specific places in the elevator where grain changes direction or passes through as it flows through the elevator) involved in routing grain from inbound carriers to the scale for the purpose of checking for spills, leaks, diversions, or unusual conditions that would affect grain weights.

(\*The state performs two types of weighing services. On Class X weighing state employees supervise elevator scale operations. (Goal A) 100% of the time and also perform duties under (Goal B). Class X weighing is required on all export grain and optional for domestic lots. Class Y weighing consists of state employees monitoring or supervising elevator weighing employees a minimum of 25% of the time).

In all Class X worker activities under (Goal B), the technician must document and record all unusual grain carrier conditions, spills, leaks, etc., estimate loss, and report findings to the technician at the scales so that proper adjustment or notations on the weight certificate can be made. This information is also used to settle weight complaints and to prove proper and official procedures were used if audited by a Federal Grain Inspection Service weighing compliance team. Under Class Y the technician must supervise elevator employees as they perform the worker activities of Goal B.

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**5% GOAL C: Performance of grain sampling activities of various types of grains moving into privately-owned grain elevators and various types of grains moving from the private elevators into international trade channels. Samples are forwarded to one of the state inspection offices located at the main elevators to determine grade factors (color, odor, test weight, foreign material, damage, dockage, sizing factors, and protein content) and established certified grade for price establishment. IMPACT: Facilitates the work of inspectors and the state protein laboratory. The effectiveness of sampling impacts on the validity of the final grade certified.**

- C.1 Draw representative samples of grains from trucks, railroad cars, and river barges using grain probes from five to twelve feet in length.
- C.2 Deposit grain sample(s) in sample bags.
- C.3 Record the following information on the sample ticket: carrier identification number, type of carrier, depth of probe, unusual conditions of the grain (musty, sour, heating, etc.) to insure proper identification and traceback of the sample to the carrier.
- C.4 Maintain visual observation of the sample until pick-up by appropriate agency personnel takes place to insure that sample switching or sample loss does not occur.
- C.5 Operate the mechanical sampler at rail car and truck dumps where yard sampling is not required by the elevator (sets timer, inspects sampler for proper operation, cleanliness, maintenance of sample identification).

**5% GOAL D: Performance of sample processing duties to prepare samples for official grade determination by an inspector. IMPACT: The work product contributes to the ability of the grain inspector to achieve accurate grade determination.**

- D.1 Pour sample into mechanical divider -- automatically separates it into two equal parts.
- D.2 Place one-half of the sample in a bag identified with original sample number in secure storage to be available for possible re-inspection request from the private elevator.
- D.3 Prepare the other half of sample for inspection by determining test weight per bushel by scale, foreign matter content to the tenth of a percent by running sample through the dockage separator machine, percent of moisture by GAC 2100 Moisture Meter and sizing factors such as shrunken and broken kernels in wheat and thin and plump in barley by placing samples on mechanical sieving devices.
- D.4 Record factors determined in D3 on the inspection ticket and pass with the sample to a licensed inspector for grade determination.
- D.5 Clean inspection offices by sweeping, dusting, washing, etc., on a daily basis.
- D.6 Perform minor equipment repair, such as tightening bolts, oiling, straightening and adjusting inspection office equipment as needed.

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**5% GOAL E: Performance of other related duties to assure a safe, efficient working environment and competent work force. IMPACT: This work affects the efficiency of manpower usage, correct performance of weighing duties, and improves employee safety.**

- E.1 Communicate regularly with the Inspector 2 stationed at the elevator, who is the assigned lead worker coordinating grain weighing duties with the grain inspection duties where required, keeping him informed of all aspects of the grain weighing operations to assure his awareness and involvement in necessary manpower and weighing decisions.
- E.2 Advise uninformed technicians on individual elevator safety factors such as emergency escape routes, emergency procedures, and etc., to assure the safety of all employees.
- E.3 Train lower level technicians in the differences in scale types, grain flow systems and weighing procedures used in individual elevators to assure the technician has adequate knowledge and familiarity with the systems and procedures to perform duties properly.
- E.4 Monitor the performance of lower level technicians performing grain lot identity, grain flow security and scale operation duties and check their reports and records to assure accuracy and completeness of weights obtained and procedures used.

## KNOWLEDGE & SKILLS REQUIRED

1. Ability to communicate by hand writing legibly.
2. Working knowledge of arithmetic.
3. Considerable knowledge of the Federal Grain Inspection and Weighing Standard Regulations for Sampling, sample processing, and weighing and weighing-related duties.
4. Considerable knowledge of the equipment used in sampling and its proper procedure.
5. Considerable knowledge of the equipment used in grain flow (moving grain into and out of elevator terminals – Construction, normal physical condition and acceptable variances of equipment in use).
6. Working knowledge of the various grain carriers (hopper car, box car, trucks, ships, etc.) and the typical areas of malfunction associated with each type.
7. Extensive knowledge of the construction and operation of weighing scales and scale-related equipment, such as weight ticket printers, weight accumulators for maintenance of running total and electronic digital displays for visual verification of printed weights.
8. Working knowledge of the common types of grains.
9. Considerable knowledge of the department and grain elevator safety regulations and procedures associated with equipment used by the technician, equipment used in moving grain and the various grain carriers and normal inherent hazards.

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## SPECIAL REQUIREMENT

Incumbent is required to obtain and to maintain all necessary USDA-FGIS licenses to sample and to weigh standard grain.

## PERSONAL CONTACTS & THEIR PURPOSE

The work requires daily verbal communication with the lead worker or supervisor at the elevator site for purposes of coordinating manpower needs and making decisions on weighing problems which arise. Contacts are also made with other grain weighing technicians performing related weighing duties at the elevator site for purposes of counseling them on less technical weighing problems and procedures. Daily verbal communication with elevator personnel (weighers and in-house managers) for purposes of determining carrier unloading and loading priorities, correcting scale problems and weighing procedures, adjusting for spills and reviewing other related weighing items. Occasionally contacts are made with operators of grain carriers, primarily trucks, for the purpose of explaining sampling procedures, requesting the truck operator to open the truck for sampling (usually removal of top tarpaulin).

## DISCRETION & ACCOUNTABILITY

- A. Specific procedures and objectives are outlined in the Federal Grain Act and Regulations Standards and manuals. Modifications may only be approved by the supervisor after consultation with the Federal Grain Field Office supervisor. Priority of weighing work assignments are determined by the grain weighing technician if he has been delegated that authority by the lead worker or supervisor, if not, the lead worker or supervisor determines the priority.
- B. Guidelines and work methods are specific and may only be modified by the designated lead worker or supervisor, although input is obtained and accepted from grain weighing technicians when and if changes are needed.
- C. Work is reviewed on a daily basis by the lead worker and supervisor through visual observation and spot-checking of written reports.
- D. Each technician or team of technicians is/are accountable for the work that they do and sign for. Grain weighing technicians, who are assigned to monitor the work of inexperienced grain sampling technicians performing weighing duties, assume accountability for the accuracy of their work.

## PHYSICAL DEMANDS OF WORK

- A. Class X weighing requires frequent walking and climbing.
  1. Climb into or onto grain carriers.
  2. Climb ladders and stairs in elevators.
  3. Walk along tracks in railyards and along rows of trucks parked in truck lots.
- B. Sampling work requires considerable lifting, pulling, pushing, and climbing.
  1. Sampling of grain carriers with 5, 6, 8 and 10 foot grain probes weighing up to 15 pounds.
  2. Pushing probes into grain lots and withdrawal of filled probes.
  3. Carrying a number of grain sample bags weighing up to 6 pounds each.
  4. Climb up and down railcar ladders and walk on walkway on top of railcars.

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5. Open and close the top doors of covered hopper railcars.
- C. Sample processing work.
1. Requires lifting sampling bags weighing approximately 6 pounds shoulder high, as well as sample pans weighing from .5 to 3 pounds shoulder high.
  2. Bending and stooping is required to pick up samples from floor and when removing pans from dockage tester machine.
  3. Standing in one area with limited walking (0-10') is also required.

## WORKING ENVIRONMENT

A significant portion of work time is spent in a grain elevator with varying levels of dust and noise. Approximately 15% of the time is spent out-of-doors in all seasons of the year. The work requires that the technician be safety conscious and mentally alert at all times. Smoking and other potential ignition sources are banned from the elevators for the prevention of fires and dust explosions. No special equipment is needed when performing official work; however, hard hats and dust masks are available for use when overhead hazards or dusty conditions exist. Employees are occasionally in the vicinity of pesticide treated grain.

\* **NOTE** – Grain elevators contain many inherent safety hazards such as open bins, moving conveyor belts, etc, as well as containing the ingredients which can cause a deadly dust explosion.

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