

# **Approved Procedures for Milk Receivers and Sample Handlers**



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## **Approved Procedures for Milk Receivers and Sample Handlers**

The purpose of Regulatory Services' Milk Program is to ensure that raw farm milk produced or marketed in Kentucky is bought and sold using accurate weights and tests. To accomplish this objective, individuals and entities involved in Kentucky's modern milk marketing system are licensed and monitored by the Division of Regulatory Services. These include milk handlers, transfer stations, laboratories, testers and milk sampler-weighers. Payment issues and factors that can impact payments/marketing are the primary focal points of Regulatory Services' work.

The Milk Safety Branch has oversight of Kentucky's dairy industry regarding issues of public health. The Milk Safety Branch monitors all aspects of the dairy industry from farm production to final dairy processing and distribution. Regulatory Services and the Milk Safety Branch regularly cooperate to ensure the integrity of Kentucky's dairy industry.

This brochure provides a summary of requirements and accepted industry practices for individuals who are responsible for Kentucky producers' milk samples. It focuses on sampling issues at milk receiving stations. Farm sampling issues are specifically addressed in our "Approved Procedures for Milk Sampler-Weighers" brochure.

The requirements detailed in this document are established by the Kentucky Farm Milk Handlers Law (KRS 260.775 to 260.845, 260.992) and the Pasteurized Milk Ordinance. More detailed information on these requirements can be obtained from the Division of Regulatory Services and/or the Kentucky Milk Safety Branch.

## **Licensing Requirements Application—Examination—License**

Sampler-weighers are a broad category of individuals who have a vital role in the dairy industry. These individuals include milk haulers, transport drivers, milk receivers, sample couriers and dairy field representatives. These are all individuals who have responsibility for or who physically handle producer milk samples. Many of their responsibilities overlap. Due to this, it is important that everyone have a basic understanding of the other's responsibilities.

Key items to be aware of regarding the importance for all individuals to be properly licensed; it is unlawful for:

- A processor to receive milk from an unlicensed person.
- A handler to issue payment for milk that has been sampled and weighed by an unlicensed person.
- A laboratory or tester to test milk for payment that has been sampled and weighed by an unlicensed person

Thus, any individual who samples and weighs Kentucky producer's milk or *who physically handles* these producer's samples must obtain a license prior to performing these activities. The licensing process helps to establish the "*sample chain of custody*". If a licensed individual properly performs their function, accurate marketing of milk can be assured. It is important for milk receivers to ensure that milk received in their facility meets the applicable requirements. Likewise, it is important for sample handlers to be aware of whether or not the samples they deliver to the laboratory are being properly obtained and cared for while the samples are in storage or transit.

New employees engaged in activities requiring a license must first obtain a temporary license to sample and weigh by submitting a completed application with fee to Regulatory Services. The temporary license is valid for 120 days. Once the temporary license is issued, the new employee should work under the supervision of a licensed person until he/she is deemed competent. During this 120-day period, temporary license holders must attend the formal sampler-weigher's training program and score a minimum of 70% on a written exam administered at the conclusion of the program. Upon passing the exam, the applicant will be issued a License to Sample and Weigh Milk in Kentucky. All individuals should be able to present their license upon request while performing milk sampling and weighing activities or while handling milk samples.

The License to Sample and Weigh Milk will expire on June 30 of each year. The license must be renewed prior to July 1 by submitting a properly completed renewal application with fee to Regulatory Services.

## **Appearance, Hygiene and Work Area**

As an employee of the dairy industry, convey a good, clean image. Abide by plant policies regarding security, safety and sanitation. Key points in this area include:

- Question and report the presence of unknown visitors or unusual behavior.
- Do not take food or tobacco into the milk receiving or plant area.
- Wash and dry your hands prior to examining or sampling milk.

When appropriate utilize the following:

- Hard hat,
- Slip-proof and/or steel-toe shoes,
- Hair net, and
- Minimize jewelry and loose clothing.

Always be sure to maintain a secure work area with properly operating equipment.

## **Equipment and Supplies**

Milk sampler-receivers should regularly monitor all equipment and supplies and make sure the work area is well lit and maintained in a sanitary condition.

1. Plant equipment includes pumps, hoses, CIP (clean-in-place) systems, measuring equipment, etc. Monitor the equipment for:
  - a. Volume,
  - b. Pressure,
  - c. Temperature,
  - d. Cleaners,
  - e. Sanitizers,
  - f. Ensure offloaded products are directed to the proper vessel, and
  - g. Ensure proper operation of scales, meters and automatic samplers.
2. Sampling equipment and supplies include:
  - a. Sterile sample containers,
  - b. Waterproof marker,
  - c. Approved soaps and cleaners,
  - d. Brushes or other cleaning pads,
  - e. Sample dipper stored in approved sanitizing solution,
  - f. Spray sanitizer,
  - g. Sanitizer test strips,
  - h. Single service towels, and
  - i. A calibrated thermometer.

3. Record keeping supplies include an ink pen and:
  - a. Receiving documents,
  - b. Load-out tickets,
  - c. Scale or meter tickets,
  - d. Wash charts,
  - e. Wash tags and
  - f. Tanker seals.

### **Milk sample storage area**

Kentucky milk receiving stations are required to provide adequate storage for milk samples. A minimum sample storage capacity for samples typically representing three days bulk milk shipments must be provided. Refrigerators are required to be monitored daily to ensure maintenance of the sample storage temperature between 32° to 40° F (0° to 4.4° C).

Daily records must be maintained to ensure the proper temperature. Documentation may include a monitored recording device or a written record maintained by a licensed individual. The record shall include the:

1. Date,
2. Time (including AM/PM or military time),
3. Temperature and
4. Licensed individual's initials or signature.

### **Initial Bulk Milk Approval**

Each milk receiving operation is unique. The procedures outlined in this document can be modified slightly to fit your operation's situation. Consult with your local milk inspector to ensure compliance regarding any significant modification of these procedures.

Milk receivers assist in determining whether a load of milk is approved for unloading. There are two general categories of bulk milk deliveries:

1. Raw farm milk delivered direct from the farm and
2. Transfer station to plant or plant to plant loads.

*This section will address typical loads of raw farm milk delivered direct from the farm.*

Many milk receiving operations utilize scales to "weigh in" trucks. When weighing in the truck, be sure to examine it for unusual conditions such as excessive ice and snow build-up during the winter. Generally, the hauler should remain in the truck during the "weigh in" and subsequent "weigh out" processes. Scales tickets should be numbered and clearly identified with the date, time and an identity number of the load.

## Initial Approval of the Load

Examine the truck for regulatory requirements and for your plant's standards after it reaches the receiving area.

The truck should be reasonably clean. Look for the following information:

1. Hauling companies' name and address,
2. Tank ID number,
3. Current tank inspection sticker (or actual inspection sheet),
4. Appropriate tanker seals (*properly numbered and recorded*),
5. An accurately completed wash tag, which must accompany all tanker trucks. The wash tag must be identified with the following information:
  - a. Identification of the milk tank truck,
  - b. Date and time the truck was cleaned and sanitized,
  - c. Location where the truck was cleaned and sanitized and
  - d. Signature or initials of the person who cleaned and sanitized the truck.
  - e. *Some organizations also have seal numbers recorded on the wash tag.*
6. Closely examine the tanker's rear compartment and dome lid areas to determine if it is compatible with your plant's CIP wash system. You should not attach a wash tag if your plant's equipment cannot properly wash and sanitize the tanker. Prior to unloading a tanker that is not compatible with your plant's CIP system, you will need to inform the hauler that you will not be able to wash and sanitize the tank.
7. Examine the accompanying load ticket(s). Loads of raw farm milk being delivered direct from the farm (and transfer station loads) will be accompanied with "bulk milk tickets". These tickets should be completed by the hauler prior to arriving at the plant. Review all accompanying tickets for the following information:
  - a. Identification of the handler (supplier)
  - b. Identification of the receiving station
  - c. Producer identification (and tank ID if producer has multiple tanks)
  - d. Date and time (including AM/PM or military time) of milk pickup
  - e. Temperature of milk
  - f. Stick or tube gauge reading
  - g. Converted milk weight
  - h. All appropriate BTU (Bulk Tank Unit) numbers
  - i. Milk hauler's legible signature
  - j. Milk hauler's permit number
  - k. *Some organizations also have seal numbers recorded on milk tickets*

8. The load of raw farm milk should be accompanied with a complete sample set which includes:
  - a. A temperature control sample
  - b. A sample for each farm tank
  - c. A truck “load” sample
  
9. Examine the samples for proper sample identification and for proper storage in a rack or floater and in ice and water. Samples should be identified with:
  - a. Producer identification (and tank ID if producer has multiple tanks)
  - b. Date and time (including AM/PM or military time) of milk pickup
  - c. Temperature of milk
  - d. Milk hauler’s initials

Any special or additional samples should be clearly identified. Be sure to observe that the hauler follows your plant’s milk sample transfer procedures. This should help to ensure the samples are properly placed in the storage refrigerator.

#### **Final Approval to Unload**

Carefully examine and rinse the dome area of the tanker. While examining the dome area, **do not** allow your sanitized thermometer or dipper to touch anything. Check for appropriate seals and verify seal numbers.

#### **Evaluate the milk for odor, appearance and temperature.**

Carefully open the lid to ensure that the gasket or any other materials do not fall into the tanker. Immediately smell the milk to check for any “off-odors”, look for any foreign material, and obtain the milk temperature with your sanitized thermometer. The temperature must be below 45°F (7.2 °C), however, your plant may have stricter requirements.

#### **Obtain the tanker sample.**

1. Adequately label the sample container with a waterproof pen. This should always include the date and tanker number. It is also recommended to identify the sample with the time and temperature of the load.
  
2. Sample the milk with your approved sanitized stainless-steel dipper. Rinse the dipper in milk at least twice prior to sampling. Sample well below the milk surface and avoid sampling foamy areas of the milk.
  
3. Obtain a representative sample. Fill the container approximately  $\frac{3}{4}$  full while holding it **away** from the tanker lid opening. Immediately take the sample to the laboratory or place in a secured refrigerator.
  
4. Properly insert a dome or vent filter and close the dome, making sure that the lid is not sealed.

Note: Some plants utilize tanker agitators. Plant agitation systems operate differently; thus, sampling procedures may vary slightly. Agitation requirements will likely vary according to tanker size and design. If your plant has an agitation system, be thoroughly familiar with it prior to its operation and abide by your plant's sampling procedures.

The tanker sample you obtain in the receiving area is sometimes referred to as the Appendix N sample. Appendix N is the drug residue testing section of the Pasteurized Milk Ordinance (PMO). The tanker samples you obtain will be used for drug residue testing and potentially other tests of milk quality. Other tests conducted include somatic cell counts (SCC), added water, bacteria and butterfat.

**Never** unload a tanker of milk until it has been properly approved and cleared by your laboratory.

### **Completing the unloading process.**

After the load has been cleared:

1. Connect the receiving hose, making sure the in-line filter is in place
  - a. If an in-line sampler is used at your plant, be sure it is clean and dry with a sterile, properly labeled sample container in place.
  - b. If an in-line meter is used, be sure the meter is properly set.
2. Set the valves and piping to pump the milk into the desired silo.
3. Open the truck tanker's valve and bleed the air out of the hose.
4. Start the unloading pump and check for any leaks in the unloading system.
5. Double check to ensure the milk is being unloaded into the proper silo.
6. Turn off the pump when the tanker is empty. It may be necessary to cycle the pump on and off near the end of the load to capture all the milk.
  - a. If an in-line sampler is used, remove the sample and deliver it to the lab or place it in the refrigerator.
  - b. If an in-line meter is used, record the metered pounds or gallons.
7. Cap the receiving hose and carefully hang it up. Do not store the hose on the floor or allow the hose end to drag across the floor.

8. Connect the Clean in Place (CIP) unit.
  - a. Hook the return hose to the tanker outlet.
  - b. Thoroughly wash and sanitize the dome area, including all lids and gaskets.
  - c. Insert the CIP unit and secure it to the tanker.
  - d. Make the proper selections on the CIP controller.
  - e. Identify the tanker being washed on the appropriate CIP recording chart and other wash records.
  - f. Start the CIP unit.
  - g. Observe that the tanker's pump and other assemblies are taken apart and properly cleaned (the hauler is responsible for this activity at many locations).
  
9. After the CIP cycle is complete:
  - a. Remove the CIP unit.
  - b. Close, secure and properly seal all lids.
  - c. Remove the return hose from the tanker outlet valve; ensure the tanker is properly drained.
  - d. Complete the wash tag with all required information and attach it to an appropriate location near the pump.
  - e. Seal the rear doors (or outlet valve if applicable) of the tanker after the pump and other assemblies are properly secured in the compartment.
  
10. For locations with scales, "weigh out" the truck.
  
11. Complete your location's required paperwork.

*This section will address transfer station to plant loads and plant to plant transfers.*

### **Transfer Station to Plant Loads**

A transfer station is a location where farm bulk milk is transferred directly from one truck tank to another. This process is utilized to more efficiently transport milk over long distances. Generally, a transfer station load will be comprised of two smaller truck tanker loads of milk. Occasionally some transfer station loads will contain three smaller loads of milk.

The requirements for transfer station loads are very similar to those for raw farm milk deliveries. All samples and load tickets for each "small load" that make up the transfer station load should accompany the shipment. An additional transfer "truck tanker load sample" should also accompany the sample set. The large volume of samples and paperwork associated with transfer station loads makes accurate and legible record keeping very important with this type of shipment.

## **Plant to Plant Loads**

As a milk receiver, you will likely be responsible for both receiving products from other plants and loading out products to be shipped to other facilities. In either case, you will need to be familiar with “labeling requirements” for plant to plant shipments. “Labeling requirements” are those items required to be recorded on the shipping documents for all plant to plant transfers. The following requirements are derived from the PMO:

*“Milk tank trucks transporting raw, heat-treated or pasteurized milk and milk products to a milk plant from another milk plant, receiving station or transfer station are required to be marked with the name and address of the milk plant or hauler and shall be sealed; in addition, for each such shipment, a shipping statement shall be prepared containing at least the following information:*

- 1. Shipper's name, address and permit number. Each milk tank truck containing milk shall include the IMS Bulk Tank Unit (BTU) identification number(s) or the IMS listed Plant Number, for farm groups listed with a plant, on the weight ticket or manifest.*
- 2. Permit identification of hauler, if not an employee of the shipper.*
- 3. Point of origin of shipment.*
- 4. Tanker identification number.*
- 5. Name of product.*
- 6. Weight of product.*
- 7. Temperature of product when loaded.*
- 8. Date of shipment.*
- 9. Name of supervising Regulatory Agency at the point of origin of shipment.*
- 10. Whether the contents are raw, pasteurized, or in the case of cream, lowfat or skim milk, whether it has been heat-treated.*
- 11. Seal number on inlet, outlet, wash connections and vents.*
- 12. Grade of product.”*

Ensure that all loads of milk or milk products received or shipped by your plant meet the above labeling requirements. Consult with a supervisor if you are uncertain whether or not a labeling requirement has been met.

## **Emphasis on Security**

A final note on security in the work area: Maintain a secure environment in areas where paperwork is conducted and where wash tags and seals are stored. Access to these areas should be prohibited at all times. The integrity of your plant’s record keeping, sanitation and security measures could be compromised if these items are left unsecured.

*This document was prepared by the University of Kentucky, Division of Regulatory Services with consultation provided by the Kentucky Milk Safety Branch. Contact Regulatory Services for a more detailed description of sampler-weigher requirements as outlined in the Kentucky Farm Milk Handlers Law at (859) 257-2785 or visit [www.uky.edu](http://www.uky.edu). The Milk Safety Branch should be contacted regarding their requirements at (502) 564-3340.*

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