Human Performance Attachment –Excerpts from United Dairymen of Arizona Milk Hauling Procedures

Phoenix, AZ

HWY21MH008

(33 pages)

United Dairymen of Arizona

Milk Hauling Procedure

Preparing for the day

II. Preparing for the Day

A. Come to work with a clean, tidy appearance:
   1. Clean work clothes and hair tucked under a hat or cut short
   2. When gloves are used, ensure they are nitrile or Single Service Gloves . Cloth/leather are not acceptable. Leather Gloves are permitted only in **HOT** Temps climb tanker ladder/handle dome lid

B. Collect the necessary tools for the day's work:
   1. Invoices for the entire day's routes (in the event the iPad system is down)
   2. Labels and sample vials for the day's routes
   3. **BLACK** Ball point pen and waterproof pen
   4. Spray bottle filled with 100 ppm chlorine solution
   5. Thermometer (calibrated in the first 10 days of each month)
   6. Ice chest with enough water and ice to last entire shift
   7. Foam vial floaters
   8. Enough seals for each load you haul
   9. Flashlight
   10. Milk Haulers license
   11. State Evaluation Form

II. Preparing for the Day (cont)

C. Inspections
   1. Inspect tractor, including write-ups by previous driver
   2. Inspect trailer including CIP status and seals
      a) Wash tag (must be less than 24 hours old)
      b) Initial seal numbers on wash tag after verifying accuracy
      c) DO NOT break any seals prior to the arrival at your first stop to ensure security of the tanker
   3. Complete safety inspection of trailer
   4. If any part of the inspection is unsatisfactory, inform the Yard Foreman, who will assign you a new tanker.

D. Complete paper invoices ***ONLY*** in ***BLACK INK!***

Sanitizing

V. Sanitizing

A. Spray the thermometer (or other milk contact surfaces that are specified in this manual) with the chlorine solution that you got at the Transportation Department or your Employer.
B. Cover the surface: 1 or 2 short squirts is enough
C. Wait 30 seconds; the chlorine requires this length of time to kill the bacteria.

Checking The Temperature

VI. Checking the Temperature

A. Use your own thermometer, not the tank thermometer.
B. Have your thermometer calibrated within the first 10 days of each month.
C. Sanitize the thermometer.
D. Checking the temperature varies with each style of bulk tank opening:
    1. DOME LID TANKS
        a. If the milk level is high enough, you may place your sanitized thermometer directly into the milk.
        b. Record the temperature on the invoice.
        c. If the milk level is too low, pull a sample with the sanitized dipper. Pull enough to fill a quart size container, then insert the sanitized thermometer into the container. Discard this milk.

Does this seem like too much milk? The milk temperature in a small vial will increase 2-3 degrees in the time you hold the vial to take the temperature, as confirmed in the laboratory.

VI. Checking the Temperature (cont)

2. TANKS or SILOS with SEPTUM SAMPLERS

a. Pull a quart sample of milk with a septum needle and discard it.
b. Pull another quart sample and insert the sanitized thermometer probe.
c. Record the temperature on the invoice and then discard the second sample of milk.

(Why discard the first container of milk? Because the milk closest to the silo or tank wall is likely to be warmer than milk in the center of the silo.)

Sample Procedures

VIII.Sampling Procedures

A. Pull two producer samples for each tank you pump.
B. Pull one sample from the dome of the tanker after your last pick up and mark it *ANTI*.

IX. Pulling the Sample

Stop! *If you haven't agitated the milk for TEN minutes, you're not ready for this step!*

A. For all producer bulk tank samples:
   1. Pull 2 samples from each bulk tank
   2. Fill sample vials to the fill line. (If you overfill them, they can't be agitated properly for laboratory testing.)
   3. Label samples immediately.
   4. Place samples immediately in the floater in the ice chest.

B. Does the tank have a dome lid?
   1. Sanitize the dipper
   2. Rinse the sample dipper in the milk twice before pulling the sample to remove the chlorine film.
   3. Insert the dipper 6-9 inches into the milk to get representative samples.
   4. Keep the vial lid closed until you're ready to pull the sample.
   5. Transfer milk from the dipper to the vial AWAY from the open lid of the bulk tank.

IX. Pulling the Sample (cont)

6. Fill the sample vial to the fill line and close the vial.
7. Repeat for the second bulk tank sample.
8. Close the dome lid.
9. Attach labels to vials.
10. Place vials in foam floater in the ice chest. Be sure the samples are immersed in the ice slurry.
11. If you're picking up milk from more than one tank, follow the same steps outlined above for each tank.

IX. Pulling the Sample (cont)

D. Does the tank/silo have a septum sampler?

1. Sanitize the septum sampler.
2. Pick up the unused needle supplied by the producer*.
3. Insert the needle into an unused hole in the septum sampler.
   Tip: If you're using a hole on the outer edge of the sample, push the needle in at an angle.
4. Fill the two sample vials, then remove the needle. Dispose of the needle in the trash container after replacing the cap.

If a needle isn't available, or if all of the septum holes have been punctured:

a) Notify the producer (personally or on the invoice)
b) Pull the sample using the petcock sampler procedure.
c) Circle the "B" on the sample vial label.

Measuring The Milk

XIII. Measuring the Milk

A. Reading a tank stick
   1. When the milk surface is completely calm, pull the measuring stick from the resting position in the tank cradle.
   2. Wipe the stick with a clean paper towel.
   3. Place the stick back in the tank cradle.
   4. Pull the stick out to read the milk level.
   5. Repeat the process to compare a second stick reading.
   6. If the milk surface is exactly between two numbers, use the even number. Otherwise, simply use the number closest to the level of the milk.
   7. Record the stick reading on the invoice.
   8. Find the stick reading figure on the Tank Chart for that tank.
   9. Write the matching number of pounds on the invoice.

Reading the Site Tube

XIV. Reading a site tube

1. Sanitize the site tube hook-up nut and valve outlet.
2. Hook tube up.
3. Slowly open tank valve enough to allow milk to flow into tube.
4. After milk settles, loosen hose nut at the bottom of the site tube slightly to allow any air bubbles to escape.
5. Tighten hose nut.
6. Let milk completely settle again.
7. If the milk surface is between two numbers, use the even number. When the milk level has an upward curve, use the reading at the bottom of the curve.
8. Record the site tube reading on the invoice.
9. Close the tank valve.
10. Disconnect the tube and release milk from the tube.

XV. Reading a site tube (cont)

C. Using a scale
   1. Stop the truck before the scale. Get out of the truck to check the dairy scale to be sure the setting is at zero.
   2. If there is a problem with the scale, notify the producer.
   3. If the scale is working properly, proceed on to the scale for your light weight.
   4. After pumping the milk, zero the scale again, then scale again for the heavy weight.
   5. If you pump from more than one tank, each tank must be scaled.
   6. Label scale ticket with:
      a. Your name
      b. Route number
      c. Date
      d. UDA invoice number
   7. Leave copy of scale ticket at the dairy. If you're scaling at UDA, bring the scale ticket back to the dairy the following day.

Monitoring Tanker Loading

XVI. Monitoring Tanker Loading

1. Drivers are responsible for watching the member pump and hoses while the pump is running.
2. Stay in full view of the member pump and tanker while the milk is being pumped into the tanker.
3. If the milk hose comes off and you are not watching, you will be held responsible for the milk.
4. If the hose or pump malfunctions in any way, IMMEDIATELY:
    a. Shut off the milk valve on the bulk tank
    b. Shut off the tanker valve
    c. Shut off the pump
5. Notification of the problem:
    a. Contact the producer or manager / herdsman immediately.
    b. Notify the Transportation Office: (480)966-7211 during office hours or Yard Foreman by radio during evening / weekend hours.
6. You are not responsible for the repair of malfunctioning or damaged member pumps or hoses. You ARE responsible for:
    a. Operating them properly
    b. Watching them while you're pumping the load
    c. Proper notification if there is any problem

Security Sealing of Tankers

XVII.Security Sealing of Tankers

1. All milk tankers must be sealed when delivered to any receiving plant.
2. Two places are sealed on each tanker: the dome lid/CIP Port and the outlet valve.
    a. The UDA receiver attaches both seals after a tanker CIP and writes the seal numbers on the CIP wash tag.
    b. The CIP port seal is broken ONLY by UDA or a receiving plant which will CIP the tanker.
    c. Improperly sealed tankers will be rejected by the receiving plant and the load will be dumped and billed to the offending company.
3. Drivers break two seals at the first stop on their route: the dome lid and the outlet valve.
    a. Place seals in wash tag container and record on wash tag
    b. Do not tamper with CIP seal
4. Drivers attach new seals each time the load is in transit and/or after the last stop of the route.
    a. Attach to dome lid and the outlet valve
    b. The iPad will prompt for seal numbers when you have reached that point of data entry. Otherwise, write the seal numbers in the comment section on the load ticket for manual entries.
    c. You will need at least 2 seals for each route of the day.
    d. Seals are available from your supervisor.
5. Drivers will remain with the tanker until relieved by the Receiving Plant. Any time the driver leaves the tanker unattended, the tanker must be sealed at all openings.
6. All tankers will be resealed by the Receiving Plant after unloading.

Sending Milk Samples

XX. Sending Milk Samples to Lab

A. Make sure sample lids are securely closed
B. Make sure all information is written on Label (See XV Producer Sampler Section)
    1. This will keep you from being held up in Receiving
C. Place Sample Right side up in carrier
D. Use the foam to cushion the samples
E. Do Not stuff the carrier with samples
F. Place carrier into chute and send to lab
G. Send one carrier at a time
H. Wait a few minutes before sending next carrier

At The Dairy

An Overview

XXI. At the Dairy: An Overview

A. If the dairy uses a scale, see *SCALE PROCEDURES* (p. 41)
B. Bring sampling materials into the milk room, (p. 5-7)
C. Sanitize the thermometer, see *SANITIZING* (p. 20)
D. Check milk for color, odor, and contamination
E. Check milk temperature – must be 40º or less, see *TEMPERATURES* (p. 22)
F. If milk is not satisfactory, contact Transportation and proceed to next dairy.
G. If milk is satisfactory, complete steps H-Y below.
H. Fill in invoice, see *INVOICE PROCEDURES* (p. 8-16)
I. Measure milk, see *MEASURING MILK* (p. 38)
J. Turn agitator to manual and run for 10 minutes.
K. Sanitize bulk tank connection and pump hose end.
L. Be sure hose cap is in place; then put through hose port.
M. Sanitize tanker hose connection and tanker hose end, then hook hose to tanker.
N. Vent tanker by opening dome lid.

XXI. At the Dairy: An Overview (cont)

O. Wash hands and dry with a single service towel.

P. Pull sample, see *SAMPLING MILK* (p. 27-31).

Q. Pump milk.

R. When pumping is complete, rinse out the transfer hose.

S. Rinse dipper, leave in wash vat.

T. If you leave milk in the tank (a pull-off), turn the agitation/refrigeration units to Auto.

U. If you emptied the tank ("clean out"), rinse the inside of the tank with warm water.

V. Also rinse off:

1. Tank exterior
2. Milk room floor
3. Drive pad
4. Back of trailer

W. Be sure tanker dome lid is secure before moving truck

X. Return to scale OR proceed to next destination.

Y. Be sure tanker dome lid and rear valve are sealed.

Driver Quality Control

Checklist

Driver Quality Control Checklist (1 of 3)

1. Clean and dry hands before sampling.
2. Have a tidy, clean appearance.
3. Do not use tobacco in milk house.
4. Cap hose properly between milk pick-up operations.
5. Sanitize bulk tank milk outlet valve before connecting transfer hose.
6. Use your calibrated, sanitized thermometer (30 seconds contact time); write the temp. on the invoice.
7. Measure the milk when it is still; use the correct tank chart for each tank.
8. If using scale weights, scale between each tank (including 2 tanks on same dairy).

Driver Quality Control Checklist (2 of 3)

9. Agitate the milk sufficiently (minimum of 10 minutes).
10. Store and handle the sample vials properly to avoid contamination.
11. Bring proper ice chest into milk room.
12. Use sanitized dipper.
13. Rinse the dipper 2 times in milk before transferring sample.
14. Extend the dipper 6-8 inches in milk.
15. Transfer milk into the sample vial away from open dome lid.
16. Pull two samples from each tank you pump.

Driver Quality Control Checklist (3 of 3)

17. Clean dipper after sampling.
18. Pull septum sample with clean needle from unused hole.
19. Fill sample vials just to fill line.
20. Place samples immediately in ice chest.
21. Complete invoice and labels properly.
22. Leave milk room in tidy condition.
23. Hose down milk load-out pad.
24. Seal dome lid and unloading valve