

39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	101
Committee:	Tech Eng
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

This proposal seeks to prevent alterations and/or bypasses of the public health controls programming that has been verified by the Regulatory Agency as per App H., X. requirements for Automatic Milking Installations (AMI's), as well as to meet the cleaning/sanitization requirements found in Section 7, Item 1r, 10r, and 11r. of the PMO.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

Wash cycle protocols for AMI's have been observed in the field that do not meet PMO requirements. When this issue has been observed, the verified cleaning programming has been bypassed and replaced with non-compliant settings being utilized on the AMI. The non-compliant settings have been observed such that after collecting abnormal milk, a local rinse was performed on the AMI rather than a clean and sanitize step prior to collecting sellable milk. To prevent alterations or bypasses to the computerized system's control functions post regulatory commissioning, resulting in a failure to meeting PMO criteria found in Section 7, Items 1r, 10r, 11r, and Appendix H section X, this proposal would require all AMI

manufacturers to ensure that installed clean cycle modes meet PMO requirements and cannot be altered once approved installation occurs. If more than one wash setting is available on a model, then the manufacturer shall provide a way of locking out any non-PMO compliant settings to prevent bypassing the public health controls. Section 7, Item 1r requires equipment used for the handling of abnormal milk to be cleaned and sanitized prior for use in handling milk that will be offered for sale. For Section 7, Item 10r, explains the need for proper cleaning. Section 7, Item 11r discusses the need for proper sanitizing as well as the requirements for meeting proper sanitization standards. Having non-PMO compliant settings locked out, prevents the AMI from performing functions to the detriment of public health.

Proper cleaning cycles are paramount to ensure all wash cycles, including post collection of abnormal and/or treated milk, meet PMO requirements to prevent possible contamination of the bulk tank or other milk storage vessels that contain milk to be offered for sale.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
36, 45, 50	2023 PMO <i>Section(s): 7</i> <i>Item: 1r, 10r, and 11r</i>		
283	2023 PMO <i>Section(s): X</i> <i>Appendix: H</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

Modify the 2023 PMO, page 36 to insert the additional text after item 7:

NOTE: AMIs shall be programmed to perform a clean (wash) and sanitize cycle after any abnormal milk has been detected by the AMI. Should an AMI come equipped with multiple

wash settings, any non-compliant settings shall be permanently inactivated and verified during commissioning by the Regulatory Agency and may be reviewed on routine inspection.

Modify the 2023 PMO, page 45 to insert the additional text after item 2:

NOTE: AMIs shall be programmed to perform a clean (wash) cycle after any abnormal milk has been detected by the AMI. Should an AMI come equipped with multiple wash settings, any non-compliant settings shall be permanently inactivated and verified during commissioning by the Regulatory Agency and may be reviewed on routine inspection.

Modify the 2023 PMO, page 50 to insert the additional text after item 2:

NOTE: AMIs shall be programmed to perform a sanitization after any abnormal milk has been detected by the AMI. Should an AMI come equipped with multiple wash settings, any non-compliant settings shall be permanently inactivated and verified during commissioning by the Regulatory Agency and may be reviewed on routine inspection.

Modify the 2023 PMO, page 283 to insert additional language after item 3:

4. All computerized control functions and programming modes effecting cleaning/sanitizing protocols shall meet the standards of this ordinance. Any programming for cleaning/sanitizing modes that do not meet the standards of this ordinance must be permanently inactivated and verified during commissioning by the Regulatory Agency and may be reviewed on routine inspection.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	102
Committee:	Hauling
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

This proposal strikes out language in the PMO, item 5r. that pertains to direct loading and redundancies. Language was then added in item 9r., item 14r., and item 18r. of the PMO to account for direct loading operations.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

NCIMS Hauling Procedures Committee was charged with the responsibility to review PMO, Item 5r. to evaluate if language within Item 5r. needed to be removed and if so, did it need to be placed under other Item r section(s). The NCIMS Hauling Procedures Committee found that there was indeed language that was not appropriately placed in Item 5r. That language was struck through and if needed, language was then added to item 9r, item 14r, and item 18r to account for some of these instances. Redundancies were also discovered within item 5r. that are already stated under other PMO Item r section(s). Removing these redundancies will ensure accuracy of current practices.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
Pages 40-44, Item 5r. Pages 48-49, Item 9r. Page 56, Item 14r. Page 60, Item 18r.	2023 PMO <i>Section(s): 7</i> <i>Appendix:</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change: PMO, Item 5r. (pages 40-44); Item 9r. (pages 48-49); Item 14r. (page 56)
Item 18r. (page 60)

ITEM 5r. MILKHOUSE – CONSTRUCTION AND FACILITIES

A milkhouse of sufficient size shall be provided, in which the cooling, handling and storing of milk and the washing, sanitizing and storing of milk containers and utensils shall be conducted, except as provided for in Item 12r of this Section.

The milkhouse shall be provided with a smooth floor constructed of concrete or equally impervious material; graded to drain; and maintained in good repair. Liquid waste shall be disposed of in a sanitary manner. Floor drains shall be accessible and shall be trapped if connected to a sanitary sewer system.

The walls and ceilings shall be constructed of smooth material; be in good repair; and be well painted or finished in an equally suitable manner.

The milkhouse shall have adequate natural and/or artificial light and be well ventilated.

The milkhouse shall be used for no other purpose than milkhouse operations. There shall be no direct opening into any barn, stable or parlor or into a room used for domestic purposes.

Provided, that a direct opening between the milkhouse and milking barn, stable or parlor is permitted when a tight-fitting, self-closing, solid door(s) hinged to be single or double acting is provided. Screened vents in the wall between the milkhouse and a breezeway, which separates the milkhouse from the milking parlor, are permitted, provided animals are not housed within the milking facility. Water under pressure shall be piped into the milkhouse.

The milkhouse shall be equipped with a two (2) compartment wash vat and adequate hot water heating facilities.

A transportation tank may be used for the cooling and/or storage of milk on the dairy farm.

Such tank shall be provided with a suitable shelter for the receipt of milk. Such shelter shall be adjacent to, but not a part of, the milkhouse and shall comply with the requirements of the milkhouse with respect to construction items; lighting; drainage; insect and rodent control; and general maintenance. ~~In addition, the following minimum criteria shall be met:~~

~~1. An accurate, accessible temperature recording device shall be installed in the milk line downstream from an effective cooling device, which cools the milk to 7°C (45°F) or less.~~

~~Electronic records that comply with Appendix H., IV. Temperature Recording Devices Used in Storage Tanks and V., Criteria 4, 7, 8, 9, 11 and 12 of this Ordinance, with or without hard copy, may be used in place of temperature recording records. (Refer to the NOTE on page 44.) An indicating thermometer shall be installed as close as possible to the recording device for verification of recording temperatures. This indicating thermometer shall comply with all applicable requirements in Appendix H. of this Ordinance. This thermometer shall be used to check the temperature recording device during the regulatory inspection and the results recorded on the recording record or into the electronic data collection, storage and reporting system.~~

~~2. Temperature recording charts shall be maintained on the premises for a period of a minimum of six (6) months and are available for review by the Regulatory Agency. Except that, the electronic storage of required temperature records, with or without hard copy, shall be acceptable, provided the computer and computer generated temperature records are readily available for review by the Regulatory Agency.~~

~~3. The milk shall be sampled at the direction of the Regulatory Agency in a manner so as to preclude contaminating the milk tank truck or sample, by a permitted milk sample collector.~~

~~4. The milk tank truck shall be effectively agitated in order to collect a representative sample.~~

When the Regulatory Agency determines conditions exist whereby the direct loading of a milk tank truck (through by-passing the use of a farm bulk milk tank(s) and/or silo(s)) can be adequately protected and sampled without contamination, a shelter need not be provided if the following minimum criteria are met:

1. The milk hose connection is accessible to, and made from within, the milkhouse. The milk hose connection to the milk tank truck is completely protected from the outside environment at all times. Provided, based on Regulatory Agency acceptance, the direct loading of milk from the milkhouse to the milk tank truck may be conducted through a properly designed hose port that adequately protects the milkhouse opening or by stubbing the milk transfer and associated Clean- In-Place (CIP) cleaned lines outside the milkhouse wall in accordance with Item 5r, **ADMINISTRATIVE PROCEDURES #15.**

~~2. To assure continued protection of the milk, the milk tank truck manhole shall be sealed after the truck has been cleaned and sanitized.~~

~~3. The milk tank truck shall be washed and sanitized at the permitted milk plant, receiving station, or transfer station receiving the milk, or at a permitted milk tank truck cleaning facility.~~

~~4. An accurate, accessible temperature recording device shall be installed in the milk line downstream from an effective cooling device, which cools the milk to 7°C (45°F) or less.~~

~~Electronic records that comply with Appendix H., IV. Temperature Recording Devices Used in Storage Tanks and V., Criteria 4, 7, 8, 9, 11 and 12 of this Ordinance, with or without hard copy, may be used in place of temperature recording records. (Refer to the **NOTE** on page 45.) An indicating thermometer shall be installed as close as possible to the recording device for verification of recording temperatures. This indicating thermometer shall comply with all applicable requirements in Appendix H. of this Ordinance. This thermometer shall be used to check the temperature recording device during the regulatory inspection and the results~~

~~recorded on the recording record or into the electronic data collection, storage and reporting system.~~

~~5. Temperature recording records shall be maintained on the premises for a period of a minimum of six (6) months and are available for review by the Regulatory Agency. Except that, the electronic storage of required temperature records, with or without hard copy, shall be acceptable, provided the computer and computer-generated temperature records are readily available for review by the Regulatory Agency.~~

6. 2. The milk shall be sampled at the direction of the Regulatory Agency, in a manner so as to preclude contaminating the milk tank truck or sample, by a permitted milk sample collector. The milk in the milk tank truck shall be effectively agitated in order to collect a representative sample.

7. 3. The milk tank truck shall be parked on a self-draining concrete or equally impervious surface during filling and storage.

8. 4. When direct loading of a milk tank truck using either a hose port, as addressed above, or stubbing the milk transfer and associated CIP cleaned lines outside the milkhouse wall in accordance with Item 5r, **ADMINISTRATIVE PROCEDURES #15**, overhead protection of the milk hose connection to the milk tank truck shall be provided.

PUBLIC HEALTH REASON

Unless a suitable, separate place is provided for the cooling, handling and storing of milk and for the washing, sanitizing and storage of milk utensils, the milk or the utensils may become contaminated. Construction, which permits easy cleaning, promotes cleanliness. A well-drained floor of concrete or other impervious material promotes cleanliness. Ample light promotes cleanliness, and proper ventilation reduces the likelihood of odors and condensation. A milkhouse that is separated from the barn, stable or parlor and the living quarters provides a safeguard against the exposure of milk and milk equipment and utensils to contamination.

ADMINISTRATIVE PROCEDURES

This Item is deemed to be satisfied when:

1. A separate milkhouse of sufficient size is provided for the cooling, handling and storing of milk and the washing, sanitizing and storing of milk containers and utensils, except as provided for in Item 12r of this Section.
2. The floors of all milkhouses are constructed of good quality concrete (float finish permissible), or equally impervious tile, or brick laid closely with impervious material, or metal surfacing with impervious joints or other material the equivalent of concrete and maintained free of breaks, depressions and surface peelings.
3. The floor slopes to drain so that there are no pools of standing water. The joints between the floor and the walls shall be watertight.
4. Liquid wastes are disposed of in a sanitary manner. All floor drains are accessible and are trapped if connected to a sanitary sewer.
5. Walls and ceilings are constructed of smooth dressed lumber or similar material; well painted with a light-colored washable paint; and are in good repair. Surfaces and joints shall be tight and smooth. Sheet metal, tile, cement block, brick, concrete, cement plaster or similar materials of light color may be used, and the surfaces and joints shall be smooth.

6. A minimum of twenty (20) foot-candles (220 lux) of light is provided at all working areas from natural and/or artificial light for milkhouse operations.
7. The milkhouse is adequately ventilated to minimize condensation on floors, walls, ceilings and clean utensils.
8. Vents, if installed, and lighting fixtures are installed in a manner to preclude the contamination of bulk milk tanks or clean utensil storage areas.
9. The milkhouse is used for no other purpose than milkhouse operations.
10. There is no direct opening into any barn, stable or parlor or room used for domestic purposes. Except that an opening between the milkhouse and milking barn, stable or parlor is permitted when a tight-fitting, self-closing, solid door(s) hinged to be single or double acting is provided. Except that screened vents are permitted in the wall between the milkhouse and a breezeway, which separates the milkhouse from the milking parlor, provided animals are not housed within the milking facility.
11. A vestibule, if used, complies with the applicable milkhouse construction requirements.
12. Water under pressure is piped into the milkhouse.
13. Each milkhouse is provided with facilities for heating water in sufficient quantity and to such temperatures for the effective cleaning of all equipment and utensils. (Refer to Appendix C. of this Ordinance.)
14. The milkhouse is equipped with a wash-and-rinse vat having at least two (2) compartments. Each compartment shall be of sufficient size to accommodate the largest utensil or container used. The upright wash vat for milk pipelines and milk machines may be accepted as one (1) part of the two (2) compartment vat. Provided, that the stationary wash rack, in or on the vat, and the milking machines inflations and appurtenances are completely removed from the vat during the washing, rinsing and/or sanitizing of other utensils and equipment. Where CIP cleaning/recirculated systems eliminate the need for handwashing of equipment, the presence of the second wash vat compartment may be optional, if so determined by the Regulatory Agency, on an individual farm basis.
15. The transfer of milk from a bulk milk tank to a bulk milk pickup tanker is through a hose port located in the milkhouse wall. The hose port shall be fitted with a tight door, which shall be in good repair. It shall be kept closed except when the hose port is in use. An easily cleanable surface shall be constructed under the hose port, adjacent to the outside wall and sufficiently large to protect the milk hose from contamination. Provided, milk can be transferred from a bulk milk tank to a bulk milk pickup tanker by stubbing the milk transfer and associated CIP cleaned lines outside the milkhouse wall, provided:
 - a. A concrete slab of adequate size, to protect the transfer hose, shall be provided under the stubbed sanitary milk and CIP cleaned lines.
 - b. The outside wall of the milkhouse, where the sanitary piping and concrete slab are located shall be properly maintained and kept in good repair.
 - ~~c. The sanitary piping, stubbed outside the milkhouse, shall be properly sloped to assure complete drainage and the ends of the piping, which are located outside, shall be capped when the transfer hose is disconnected.~~
 - ~~d. After the completion of milk transfer, the milk lines and transfer hose shall be properly CIP cleaned.~~
 - e. c. After the CIP cleaning process has been completed; the transfer hose shall be disconnected, drained and stored in the milkhouse. ~~Proper storage of the transfer hose includes~~

~~capping the ends and storing the entire hose up off the floor. The sanitary piping outside the milkhouse shall be capped at all times, except when transferring milk or being CIP cleaned. When the caps are not being used, they shall be properly cleaned and sanitized after each use and stored in the milkhouse to protect them from contamination. A transfer hose manufactured with permanent hose end fittings, attached in such a manner that will assure a crevice-free joint between the hose and the fitting, may be stored outside of the milkhouse, provided it is CIP cleaned; the stubbed piping and hose length are of sufficient design to allow complete drainage after cleaning and sanitizing; and the hose remains connected to the stubbed piping when not in use.~~

f. d. Means shall be provided to sanitize the milk-contact surfaces of the transfer hose and bulk milk pickup tanker fittings prior to the connection of the transfer hose to the bulk milk pickup tanker.

~~g. At all times, the bulk milk pickup tanker manhole openings(s) shall remain closed, except for brief periods for sampling and examination when environmental conditions permit.~~

16. A transportation tank, with or without overhead protection, may be used for cooling and/or storing milk on a dairy farm. If a suitable shelter is provided for a transportation truck, used for cooling and/or storing milk, such shelter shall be adjacent to, but not a part of, the milkhouse and shall comply with the prerequisites of the milkhouse with respect to construction items; lighting; drainage; insect and rodent control; and general maintenance. (Refer to Appendix C. of this Ordinance for suggested plans and information on size, construction, operation and maintenance of milkhouses.)

In addition, the following minimum criteria shall be met:

~~a. An accurate, accessible temperature recording device shall be installed in the milk line downstream from an effective cooling device, which cools the milk to 7°C (45°F) or less. Electronic records that comply with Appendix H., IV. Temperature Recording Devices Used in Storage Tanks and V., Criteria 4, 7, 8, 9, 11 and 12 of this Ordinance, with or without hard copy, may be used in place of temperature recording records. (Refer to the NOTE on page 45.) An indicating thermometer shall be installed as close as possible to the recording device for verification of recording temperatures. This indicating thermometer shall comply with all applicable requirements in Appendix H. of this Ordinance. This thermometer shall be used to check the temperature recording device during the regulatory inspection and the results recorded on the recording records or into the electronic data collection, storage and reporting system.~~

~~b. Temperature recording records shall be maintained on the premises for a period of a minimum of six (6) months and are available for review by the Regulatory Agency. Except that, the electronic storage of required temperature records, with or without hard copy, shall be acceptable, provided the computer and computer generated temperature records are readily available for review by the Regulatory Agency.~~

c. The milk shall be sampled at the direction of the Regulatory Agency in a manner so as to preclude contaminating the milk tank truck or sample, by an acceptable milk sample collector.

~~d. The milk tank truck shall be effectively agitated in order to collect a representative sample.~~

When the Regulatory Agency determines conditions exist whereby the direct loading of a milk tank truck (through by-passing the use of a farm bulk milk tank(s) and/or silo(s)) can be

adequately protected and sampled without contamination, a shelter need not be provided if the following minimum criteria are met:

a. The milk hose connection is accessible to, and made from within, the milkhouse. The milk hose connection to the milk tank truck is completely protected from the outside environment at all times. Provided, based on Regulatory Agency acceptance, the direct loading of milk from the milkhouse to the milk tank truck may be conducted through a properly designed hose port that adequately protects the milkhouse opening or by stubbing the milk

transfer and associated CIP cleaned lines outside the milkhouse wall in accordance with Item 5r, **ADMINISTRATIVE PROCEDURES #15**.

b. To assure continued protection of the milk, the milk tank truck manhole shall be sealed after the truck has been cleaned and sanitized.

~~c. The milk tank truck shall be washed and sanitized at the permitted milk plant, receiving station or transfer station receiving the milk or at a permitted milk tank truck cleaning facility.~~

~~d. An accurate, accessible temperature recording device shall be installed in the milk line downstream from an effective cooling device, which cools the milk to 7°C (45°F) or less. Electronic records that comply with Appendix H., IV. Temperature Recording Devices Used in Storage Tanks and V., Criteria 4, 7, 8, 9, 11 and 12 of this Ordinance, with or without hard copy, may be used in place of temperature recording records. (Refer to the NOTE on page 45.) An indicating thermometer shall be installed as close as possible to the recording device for verification of recording temperatures. This indicating thermometer shall comply with all applicable requirements in Appendix H. of this Ordinance. This thermometer shall be used to check the temperature recording device during the regulatory inspection and the results recorded on the recording records or into the electronic data collection, storage and reporting system.~~

~~e. Temperature recording records shall be maintained on the premises for a period of a minimum of six (6) months and are available for review by the Regulatory Agency. Except that, the electronic storage of required temperature records, with or without hard copy, shall be acceptable, provided the computer and computer generated temperature records are readily available for review by the Regulatory Agency.~~

~~f. c.~~ The milk shall be sampled at the direction of the Regulatory Agency, in a manner so as to preclude contaminating the milk tank truck or sample, by a permitted milk sample collector. The milk in the milk tank truck shall be effectively agitated in order to collect a representative sample.

~~g. d.~~ The milk tank truck shall be parked on a self-draining concrete or equally impervious surface during filling and storage.

~~h. e.~~ When direct loading of a milk tank truck using either a hose port, as addressed above, or stubbing the milk transfer and associated CIP cleaned lines outside the milkhouse wall in accordance with Item 5r, **ADMINISTRATIVE PROCEDURES #15**, overhead protection of the milk hose connection to the milk tank truck shall be provided.

NOTE: With the identified Criteria 4, 7, 8, 9, 11 and 12 cited within Appendix H., V. of this *Ordinance*, the words “dairy farm” shall be substituted for “milk plant” wherever the words “milk plant” appear.

ITEM 9r. UTENSILS AND EQUIPMENT - CONSTRUCTION

ADMINISTRATIVE PROCEDURES

This Item is deemed to be satisfied when:

1. All multi-use containers, utensils and equipment, which are exposed to milk or milk products, or from which liquids may drip, drain or be drawn into milk or milk products, are made of smooth impervious, nonabsorbent, safe materials of the following types:
 - a. Stainless steel of the American Iron and Steel Institute (AISI) 300 series; or
 - b. Equally corrosion-resistant, non-toxic metal; or
 - c. Heat-resistant glass; or
 - d. Plastic or rubber and rubber-like materials which are relatively inert, resistant to scratching, scoring, decomposition, crazing, chipping and distortion, under normal use conditions; are non-toxic, fat resistant, relatively nonabsorbent, relatively insoluble; do not release component chemicals or impart flavor or odor to the product; and which maintain their original properties under repeated use conditions.
2. Single-service articles have been manufactured, packaged, transported and handled in a sanitary manner and comply with the applicable requirements of Item 11p.
3. Articles intended for single-service use are not reused.
4. All containers, utensils and equipment are free of breaks and corrosion.
5. All joints in such containers, utensils and equipment are smooth and free from pits, cracks or inclusions.
6. CIP cleaned milk pipelines and return-solution lines are self-draining. If gaskets are used, they shall be self-positioning and of material meeting specifications described in 1.d. above, and shall be of such design, finish and application as to form a smooth, flush, interior surface. If gaskets are not used, all fittings shall have self-positioning faces designed to form a smooth, flush, interior surface. All interior surfaces of welded joints in pipelines shall be smooth and free of pits, cracks and inclusions.
7. Detailed plans for CIP cleaned pipeline systems are submitted to the Regulatory Agency for written approval prior to installation. No alteration or addition shall be made to any milk pipeline system without prior written approval of the Regulatory Agency.
8. Strainers, if used, are of perforated metal design, or so constructed as to utilize single-service strainer media.
9. All milking machines, including heads, milk claws, milk tubing and other milk-contact surfaces can be easily cleaned and inspected. Pipelines, milking equipment and appurtenances, which require a screwdriver or special tool, shall be considered easily accessible for inspection, providing the necessary tools are available at the milkhous. Milking systems shall not have components incorporated in the return solution lines, which by design do not comply with the criteria for product-contact surfaces. Some examples of these are:
 - a. Ball type plastic valves;
 - b. Plastic tees with barbed ridges to better grip the plastic or rubber hoses; and
 - c. The use of polyvinyl chloride (PVC) water type piping for return solution lines.
10. Milk cans have umbrella-type lids.
11. Farm holding/cooling tanks, welded sanitary piping and transportation tanks comply with the applicable requirements of Items 10p and 11p of this Section.

12. During filling of bulk milk pick up tankers or bulk milk storage tanks, flexible plastic/rubber hoses may be used ~~between the fill valves of bottom fill and top fill bulk milk storage tanks~~; when needed for functional purposes. Such hoses shall be drainable, be as short as practical, have sanitary fittings, and be supported to maintain uniform slope and alignment. The end fittings of such hoses shall be permanently attached in such a manner that will assure a crevice-free joint between the hose and the fitting, which can be cleaned by mechanical means. The hoses shall be included as part of a CIP cleaning system.

13. Transparent flexible plastic tubing (up to 150 feet in length) used in connection with milk transfer stations shall be considered acceptable if it meets the “3-A Sanitary Standards for Multiple-Use Plastic Materials Used as Product Contact Surfaces for Dairy Equipment, Number 20-27” and if it remains sufficiently clear that the interior surfaces can be properly inspected. Short lengths of flexible plastic tubing (8 feet or less) may be inspected for cleanliness by sight or by use of a “rod”. The transparency or opacity of such tubing under this condition is not a factor in determining cleanliness.

14. The sanitary piping, stubbed outside the milkhouse, shall be properly sloped to assure complete drainage and the ends of the piping, which are located outside, shall be capped when the transfer hose is disconnected.

ITEM 14r. PROTECTION FROM CONTAMINATION

Milking and milkhouse operations, equipment and facilities shall be located and conducted to prevent any contamination of milk, containers, utensils and equipment. Milk shall not be strained, poured, transferred or stored unless it is properly protected from contamination. After sanitization, all containers, utensils and equipment shall be handled in such a manner as to prevent the contamination of any milk product-contact surface.

Vehicles used to transport milk from the dairy farm to the milk plant, receiving station or transfer station shall be constructed and operated to protect their contents from sun, freezing and contamination. Such vehicles shall be kept clean, inside and out, and any substance capable of contaminating the milk shall not be transported with the milk.

PUBLIC HEALTH REASON

Because of the nature of milk and its susceptibility to contamination by disease producing bacteria and other contaminants, every effort shall be made to provide adequate protection for the milk at all times. This shall include the proper placement of equipment so that work areas in the milking barn and milkhouse are not overcrowded. The quality of any air that is used for the agitation or movement of milk or is directed at a milk product-contact surface shall be such that it will not contaminate the milk.

The effect of sanitization of equipment can be nullified if the equipment is not protected after sanitizing.

To protect milk during transportation, delivery vehicles shall be properly constructed and operated.

ADMINISTRATIVE PROCEDURES

This Item is deemed to be satisfied when:

1. Equipment and operations are so located within the milking barn and milkhouse as to prevent overcrowding and contamination of cleaned and sanitized containers, utensils and equipment by splash, condensation or manual contact.
2. During the teat preparation process of an AMI, the teat cups (inflations) shall be adequately shielded to prevent contamination.
3. During milking and milkhouse operations, pipelines and equipment, used to contain or conduct milk, shall be effectively separated from tanks/silos and/or circuits containing cleaning and/or sanitizing solutions. In addition, AMIs shall provide separation between milk with abnormalities and milk intended for sale. This can be accomplished by:
 - a. Physically disconnecting all connection points between tanks/silos and/or circuits containing cleaning and/or sanitizing solutions from pipelines and equipment used to contain or conduct milk; or
 - b. Separation of all connection points between such circuits by at least two (2) automatically controlled valves with a drainable opening to the atmosphere between the valves; or by a single-bodied double seat mixproof valve, with a drainable opening to the atmosphere between the seats, if:
 - (1) The drainable opening to the atmosphere (vent) is equal to the largest pipeline connected to the mixproof valve or the following exception:
 - i) If the cross sectional area of the vent opening is less than that of the largest pipe diameter for the double seat valve, the maximum pressure in the space between the two (2) valve seats for the double seat valve shall be equivalent to or less than the maximum pressure in the space between two (2) blocking seats of two (2) automatically controlled compression type valves (three (3)-way valve to the drain and a two (2)-way valve separating product lines from cleaning and sanitizing solution lines.)
 - (2) Both valves, and valve seats in the case of single-bodied double seat valves, are position detectable and capable of providing an electronic signal when not properly seated in the blocked position. (Refer to Appendix H., I., Position Detection Devices of this *Ordinance*.)
 - (3) The valve vent, including piping between blocking valves, is not cleaned until milk has been removed or isolated, except in the case of a properly designed and operated system. This drainable opening to the atmosphere may be cleaned while milk is isolated by one (1) of the blocking valves. A properly designed and operated system shall incorporate the following:
 - i) During CIP, the valve blocking the cleaning/sanitizing solution may be pulsed open for cleaning the valve vent, including piping between blocking valves, provided the blocking valves are fail-safe and the vent is self-draining and free from restrictions. Other means of preventing pressurization of cleaning solutions on the valve isolating milk may be individually evaluated and found to be acceptable by FDA and the Regulatory Agency.
 - ii) During CIP with a valve actuation for cleaning the valve vent, including piping between blocking valves, the position detection of the valve isolating milk from the valve vent, including piping between blocking valves, and the position detection of the vent open to the atmosphere, shall be monitored and interlocked with the pump or source of liquid pressure, such that if it is determined they are not properly positioned, the pump or source of liquid pressure shall be immediately de-energized.
 - (4) These valves, or valve seats in the case of single-bodied double seat valves, are part of an automatic fail-safe system that shall prevent the contamination of milk with cleaning

and/or sanitizing solutions. Automatic fail-safe systems shall be unique to each particular installation but are normally based on the premise that both blocking valve seats are properly seated in the blocked position before the CIP cleaning system can be activated for the cleaning circuit containing this valve arrangement, except as provided in (7) below.

(5) The system shall not have manual override capability, except for testing and inspection and other maintenance related activities.

(6) Controls for the fail-safe system are tested and secured as directed by the Regulatory Agency. Testing verification procedures shall comply with the criteria set forth in Appendix H. of this *Ordinance*.

(7) The vent, including piping between blocking valves, is not cleaned until milk has been removed or isolated, except in the case of a properly designed and operated single-bodied double seat valve, in which case, the vent, including piping between blocking valves, may be cleaned while milk is present in one (1) of the valve housings. A properly designed and operated single-bodied double-seat valve shall incorporate the following:

i) There shall not be any impingement of cleaning liquid on the opposite valve seat gasket during seat lifting, even in the case of damaged or missing gaskets; and

ii) The pressure in the critical seat area of the valve vent cavity, even in the case of damaged or missing gaskets, shall be demonstrated to be atmospheric or less at all times; and

iii) During a seat-lift operation, the position of the seat opposite to the seat being lifted shall be monitored by a position detection device that is interlocked with the cleaning pump or source of the CIP cleaning solution pressure such that if this opposite seat is determined to be other than fully closed, the cleaning pump or source of the CIP cleaning solution pressure shall be immediately de-energized; and

iv) The single-bodied double seat valve vent cavity cleaning option shall have an Automated Fail-Safe Control System and the Control System shall comply with applicable provisions of Appendix H. Pasteurization Equipment and Procedures, Section VI. Criteria for the Evaluation of Computerized Systems for Grade "A" Public Health Controls of this *Ordinance*.

(8) Variations from the above specifications may be individually evaluated and found to also be acceptable if the level of protection is not compromised.

4. All milk that has overflowed, leaked, been spilled or improperly handled is discarded.

5. All product-contact surfaces of containers, utensils and equipment are covered or otherwise protected to prevent the access of insects, dust, condensation and other contamination. All openings, including valves and piping attached to milk storage tanks and milk tank trucks, pumps or vats, shall be capped or otherwise properly protected. Gravity type strainers used in the milkhouse do not have to be covered. Milk pipelines used to convey milk from pre-coolers to the bulk milk tank shall be fitted with effective drip deflectors.

6. The direct load milk tank truck manhole shall be sealed after the truck has been cleaned and sanitized.

~~6.7.~~ The receiving receptacle is raised above the floor, as on a dolly or cart, or placed at a distance from the lactating animals, to protect it against manure and splash when milk is poured and/or strained in the milking barn, stable or parlor. Such receptacle shall have a tight-fitting cover, which shall be closed, except when milk is being poured.

~~7.8.~~ Each pail or container of milk is transferred immediately from the milking barn, stable or parlor to the milkhouse.

~~8-9.~~ Pails, cans and other equipment containing milk are properly covered during transfer and storage.

~~9-10.~~ Whenever air under pressure is used for the agitation or movement of milk, or is directed at a milk-contact surface, it is free of oil, dust, rust, excessive moisture, extraneous materials and odor, and shall otherwise comply with the applicable standards of Appendix H. of this *Ordinance*.

~~10-11.~~ Sanitized product-contact surfaces, including bulk milk tank openings and outlets, are protected against contact with unsanitized utensils and equipment, hands, clothing, splash, condensation and other sources of contamination.

~~11-12.~~ Any sanitized product-contact surface, which has been otherwise exposed to contamination, is again cleaned and sanitized before being used.

~~12-13.~~ Vehicles used to transport milk from the dairy farm to the milk plant, receiving station or transfer station are constructed and operated to protect their contents from sun, freezing and contamination.

~~13-14.~~ Vehicles have bodies with solid enclosures and tight, solid doors.

~~14-15.~~ Vehicles are kept clean, inside and out.

~~15-16.~~ No substance capable of contaminating milk is transported with the milk. (Refer to Items 10p and 11p and Appendix B. of this *Ordinance* for information on the construction of milk tank trucks.)

ITEM 18r. RAW MILK COOLING

Raw milk for pasteurization, ultra-pasteurization, aseptic processing and packaging, retort processed after packaging or fermented high-acid, shelf-stable processing and packaging shall be cooled to 10°C (50°F) or less within four (4) hours after starting the milking operation. The milk shall then be cooled within two (2) more hours to 7°C (45°F) or less. Provided, that the blend temperature after the first milking and subsequent milkings does not exceed 10°C (50°F).

PUBLIC HEALTH REASON

Milk produced by disease-free lactating animals and under clean conditions usually contains relatively few bacteria immediately after milking. These can multiply to enormous numbers in a few hours unless the milk is cooled. However, when the milk is cooled quickly to 7°C (45°F) or less, there is only a slow increase in the numbers of bacteria.

Usually, the bacteria in milk are harmless, and if this were always true there would be no reason to cool milk, except to delay souring. There is, however, no way for the dairy operator or regulating officer to be absolutely sure that no disease bacteria have entered the milk, even though observance of the other Items of this Ordinance will greatly reduce this likelihood. The likelihood of transmitting disease is much increased when the milk contains large numbers of disease bacteria. Therefore, it is extremely important for milk to be cooled quickly, so that small numbers of bacteria, which may have entered the milk, will not multiply.

ADMINISTRATIVE PROCEDURES

This Item is deemed to be satisfied when:

1. Raw milk for pasteurization, ultra-pasteurization, aseptic processing and packaging, retort processed after packaging or fermented high-acid, shelf-stable processing and packaging shall be cooled to 10°C (50°F) or less within four (4) hours after starting the milking operation. The milk shall then be cooled within two (2) more hours to 7°C (45°F) or less. The start of the milking operation is the moment when milk is first transferred to an empty, clean and sanitized farm bulk milk tank, silo or direct load milk tank truck. Provided, that the blend temperature after the first milking and subsequent milkings does not exceed 10°C (50°F).

2. Recirculated cooling water, which is used in plate or tubular coolers and/or heat exchangers, including those systems in which a freezing point depressant is used, is from a safe source and protected from contamination. Such water shall be tested at least once every six (6) month period and shall comply with the Bacteriological Standards of Appendix G of this *Ordinance*. Samples shall be taken under the direction of the Regulatory Agency and examination shall be conducted in a laboratory acceptable to the Regulatory Agency. Recirculated cooling water systems, which become contaminated through repair work or otherwise, shall be properly treated and tested before being returned to use. Freezing point depressants and other chemical additives, when used in recirculating cooling water systems, shall be non-toxic under conditions of use. Propylene glycol and all additives shall be either USP Grade, Food Grade or generally-recognized-as-safe (GRAS). To determine if recirculated cooling water samples have been taken at the frequency established in this Item, the interval shall include the designated six (6) month period plus the remaining days of the month in which the sample is due.

3. All direct loading of bulk milk pick up tankers and all transportation tanks used for the cooling and/or storage of milk on the dairy farm shall be equipped with an accurate, accessible temperature-recording device shall be installed in the milk line downstream from an effective cooling device. All farm bulk milk tanks manufactured after January 1, 2000 shall be equipped with an approved temperature-recording device.

a. The temperature-recording device shall be operated continuously and be maintained in a properly functioning manner. Circular charts shall not overlap. Electronic records that comply with Appendix H., IV. Temperature-Recording Devices Used in Storage Tanks and V., Criteria 4, 7, 8, 9, 11 and 12 of this *Ordinance*, with or without hard copy, may be used in place of temperature-recording records.

NOTE: With the above cited Criteria within Appendix H., V. of this *Ordinance*, the words “dairy farm” shall be substituted for “milk plant” wherever the words “milk plant” appears.

b. The temperature-recording device shall be verified every six (6) months and documented in a manner acceptable to the Regulatory Agency using an accurate (+/- 1°C (2°F)) thermometer that has been calibrated by a traceable standard thermometer, within the past six (6) months, with the results and date recorded and the thermometer being properly identified, or by using a traceable standard thermometer that has been calibrated within the last year.

c. Temperature-recording records shall be maintained on the premises for a period of a minimum of six (6) months and are available for review by the Regulatory Agency. Except that, the electronic storage of required temperature records, with or without hard copy, shall be acceptable, provided the computer and computer generated temperature records are readily available for review by the Regulatory Agency.

d. The temperature-recording device should be installed in an area convenient to the milk storage tank and acceptable to the Regulatory Agency.

e. The temperature-recording device sensor shall be located to permit the registering of the temperature of the contents when the tank contains no more than twenty percent (20%) of its calibrated capacity.

f. The temperature-recording device shall comply with the current technical specifications for tank recording thermometers.

g. A temperature-recording device and/or any other device that meets the intent of these **ADMINISTRATIVE PROCEDURES** and technical specifications and is acceptable to the Regulatory Agency can be used to monitor/record the bulk tank temperature.

h. The temperature-recording records shall properly identify the producer, date installed, tank or silo identification, if more than one (1), and signature or initials of the person installing the record.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	103
Committee:	Hauling
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

This proposal allows milkhouse facilities to shelter bulk milk tankers by striking restrictive language from the PMO.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

There are milkhouse facilities that shelter tankers. When properly maintained they pose little or no risk to raw milk. In cases where they are poorly maintained they may simply be marked in violation under the appropriate heading, (i.e. if there are diesel fumes then mark the ventilation item under 5r) as with any other milkhouse facility. Furthermore, bulk milk tankers are sheltered inside milk plant receiving bays where air is drawn into the tanker and milk during unloading. When tankers are loaded in milkhouse facilities the air is not drawn into the bulk milk tanker, but rather displaced air is pushed out of the tanker. Since this is the case, an on-farm milk loading bay is at less risk to contaminate milk with fumes or odors than a receiving plant. Therefore, violation 5r (d)(f) and the language from item 5r on pages 40 and 43 of the PMO are unnecessary for milk protection and are restrictive to industry.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
40, 43	2023 PMO Section(s): 7 Appendix:		2023 EML
	2023 MMSR		Forms Form Number:
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change: PMO 5r (page 40 and 43)

A transportation tank may be used for the cooling and/or storage of milk on the dairy farm. Such tank shall be provided with a suitable shelter for the receipt of milk. Such shelter shall be adjacent to, but not a part of, the milkhouse and shall comply with the requirements of the milkhouse with respect to construction items; lighting; drainage; insect and rodent control; and general maintenance. In addition, the following minimum criteria shall be met:

16. A transportation tank, with or without overhead protection, may be used for cooling and/or storing milk on a dairy farm. If a suitable shelter is provided for a transportation truck, used for cooling and/or storing milk, such shelter shall be adjacent to, but not a part of, the milkhouse and shall comply with the prerequisites of the milkhouse with respect to construction items; lighting; drainage; insect and rodent control; and general maintenance. (Refer to Appendix C. of this *Ordinance* for suggested plans and information on size, construction, operation and maintenance of milkhouses.)

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	104
Committee:	Hauling
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

Add language to clarify that bulk milk pickup tankers can be parked at a dairy farm awaiting movement to market when holding milk that has been properly measured, checked for temperature and officially sampled without additional infrastructure on the farm.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

Current language in Item 5r does not distinguish between a transportation tank used for storing milk on a dairy farm, prior to the milk being properly measured, checked for temperature and officially sampled, and a bulk milk pickup tanker parked on a dairy farm holding milk that has been properly measured, checked for temperature and officially sampled.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
40, 43	2023 PMO <i>Section(s): 7, Item 5r</i> <i>Appendix:</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

Page 40

A transportation tank may be used for the cooling and/or storage of milk on the dairy farm. Such tank shall be provided with a suitable shelter for the receipt of milk. Such shelter shall be adjacent to, but not a part of, the milkhouse and shall comply with the requirements of the milkhouse with respect to construction items; lighting; drainage; insect and rodent control; and general maintenance. In addition, the following minimum criteria shall be met:

1. An accurate, accessible temperature-recording device shall be installed in the milk line downstream from an effective cooling device, which cools the milk to 7°C (45°F) or less. Electronic records that comply with Appendix H., IV. Temperature-Recording Devices Used in Storage Tanks and V., Criteria 4, 7, 8, 9, 11 and 12 of this *Ordinance*, with or without hard copy, may be used in place of temperature-recording records. (Refer to the **NOTE** on page 44.) An indicating thermometer shall be installed as close as possible to the recording device for verification of recording temperatures. This indicating thermometer shall comply with all applicable requirements in Appendix H. of this *Ordinance*. This thermometer shall be used to check the temperature-recording device during the regulatory inspection and the results recorded on the recording record or into the electronic data collection, storage and reporting system.
2. Temperature-recording charts shall be maintained on the premises for a period of a minimum of six (6) months and are available for review by the Regulatory Agency. Except that, the electronic storage of required temperature records, with or without hard copy, shall be acceptable, provided the computer and computer generated temperature records are readily available for review by the Regulatory Agency.
3. The milk shall be sampled at the direction of the Regulatory Agency in a manner so as to preclude contaminating the milk tank truck or sample, by a permitted milk sample collector.
4. The milk tank truck shall be effectively agitated in order to collect a representative sample.

*NOTE. This language does not apply to bulk milk pickup tankers parked on a dairy farm holding milk that has been properly measured, checked for temperature and officially sampled.

16. A transportation tank, with or without overhead protection, may be used for cooling and/or storing milk on a dairy farm. If a suitable shelter is provided for a transportation truck, used for cooling and/or storing milk, such shelter shall be adjacent to, but not a part of, the milkhouse and

shall comply with the prerequisites of the milkhouse with respect to construction items; lighting; drainage; insect and rodent control; and general maintenance. (Refer to Appendix C. of this *Ordinance* for suggested plans and information on size, construction, operation and maintenance of milkhouses.)

In addition, the following minimum criteria shall be met:

- a. An accurate, accessible temperature-recording device shall be installed in the milk line downstream from an effective cooling device, which cools the milk to 7°C (45°F) or less. Electronic records that comply with Appendix H., IV. Temperature-Recording Devices Used in Storage Tanks and V., Criteria 4, 7, 8, 9, 11 and 12 of this *Ordinance*, with or without hard copy, may be used in place of temperature-recording records. (Refer to the **NOTE** on page 45.) An indicating thermometer shall be installed as close as possible to the recording device for verification of recording temperatures. This indicating thermometer shall comply with all applicable requirements in Appendix H. of this *Ordinance*. This thermometer shall be used to check the temperature-recording device during the regulatory inspection and the results recorded on the recording records or into the electronic data collection, storage and reporting system.
- b. Temperature-recording records shall be maintained on the premises for a period of a minimum of six (6) months and are available for review by the Regulatory Agency. Except that, the electronic storage of required temperature records, with or without hard copy, shall be acceptable, provided the computer and computer generated temperature records are readily available for review by the Regulatory Agency.
- c. The milk shall be sampled at the direction of the Regulatory Agency in a manner so as to preclude contaminating the milk tank truck or sample, by an acceptable milk sample collector.
- d. The milk tank truck shall be effectively agitated in order to collect a representative sample.

*NOTE. This language does not apply to bulk milk pickup tankers parked on a dairy farm holding milk that has been properly measured, checked for temperature and officially sampled.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	105
Committee:	Scientific/ MMSR
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

In an effort to bring the rules in alignment with modern dairy operations and equipment, we propose updating the rules for on farm Bulk tanks to be consistent for bulk milk hauling trucks and trailers to only need to be washed once every 24 hours as long as in continuous use.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

Based on data collected there was no significant difference found between washing after each emptying of farm bulk milk silos or bulk milk tanks or washing each twenty-four hours regardless how many loads were removed and refilled. With this data, only having to wash the bulk milk farm tank once every 24 hours will increase efficiencies without impacting the safety and quality of the milk.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
49	2023 PMO <i>Section(s): Section 7</i> Item 10r <i>Appendix:</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

ITEM 10r. UTENSILS AND EQUIPMENT – CLEANING

The product-contact surfaces of all multi-use containers, equipment and utensils used in the handling, storage or transportation of milk shall be cleaned after each usage with the exception of on-farm silos and tanks that are in continuous use. If on-farm silos and tanks are never completely emptied, they only need to be washed once every 24 hours.

PUBLIC HEALTH REASON

Milk cannot be kept clean or free of contamination if permitted to come into contact with unclean containers, utensils or equipment.

ADMINISTRATIVE PROCEDURES

This Item is deemed to be satisfied when:

1. There shall be a separate wash manifold for all CIP cleaned milk pipelines in all new or extensively remodeled facilities.
2. The product-contact surface of all multi-use containers, equipment and utensils used in the handling, storage (including milk trucks, bulk tanks and silos) or transportation of milk are cleaned after each milking or once every twenty-four (24) hours for continuous operations.
3. There shall not be any partial removal of milk from milk storage/holding tanks by the bulk milk hauler/sampler, except partial pickups may be permitted when the milk storage/holding tank is equipped with a seven (7) day recording device complying with Appendix H, IV.

Temperature Recording Devices Used in Storage Tanks of this Ordinance, or other recording device acceptable to the Regulatory Agency, provided the milk storage/holding tank shall be clean and sanitized when empty and shall be emptied at least every seventy-two (72) hours. Electronic records that comply with Appendix H. of this Ordinance, IV. Temperature-Recording Devices Used in Storage Tanks and V., Criteria 4, 7, 8, 9, 11 and 12, with or without hard copy, may be used in place of temperature-recording records. In the absence of a

temperature-recording device, partial pickups may be permitted as long as the milk storage/holding tank is completely empty, clean and sanitized prior to the next milking. In the

event of an emergency situation, such as inclement weather, natural disaster, etc., a variance may be permitted at the discretion of the Regulatory Agency.

NOTE: With the above cited Criteria within Appendix H., V. of this Ordinance, the words “dairy farm” shall be substituted for “milk plant” wherever the words “milk plant” appears. The text “In the event of an emergency situation” as cited in 3. above, shall not be applicable to a TPC authorized under the ICP.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	106
Committee:	MMSR
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

This proposal seeks to align the language related to the requirements for recirculated cooling water found within Section 7 of the 2023 *Pasteurized Milk Ordinance* (PMO) with that of the 2023 *Methods of Making Sanitation Ratings of Milk Shippers and the Certification/Listings of Single Service Containers and/or Closures for Milk and/or Milk Product Manufacturers* (Methods).

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

There has been confusion regarding what is required when recirculated cooling water is found to be unsatisfactory. Language currently exists within the Methods document that is not found within the PMO. This has resulted in debits during ratings or check ratings as regulatory staff may not be familiar with the contents of the Methods document. This proposal does not create new requirements, as the suggested additional language below already exists within the Methods document, but simply aligns requirements between Methods and the PMO.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
59 and 117	2023 PMO <i>Section(s): 7</i> <i>Appendix:</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

2023 PMO, Section 7, 18r, page 59:

2. Recirculated cooling water, which is used in plate or tubular coolers and/or heat exchangers, including those systems in which a freezing point depressant is used, is from a safe source and protected from contamination. Such water shall be tested at least once every six (6) month period and shall comply with the Bacteriological Standards of Appendix G of this *Ordinance*. Recirculated cooling water systems, which may become contaminated through repair work or otherwise, should be properly treated before being returned to use. Samples shall additionally be taken upon initial construction/installation and within thirty (30) days after extensive repairs or alterations. Samples shall be taken under the direction of the Regulatory Agency and examination shall be conducted in a laboratory acceptable to the Regulatory Agency. The Regulatory Agency shall physically inspect and re-sample the recirculated cooling water supply/system within thirty (30) days following an unacceptable bacteriological result. ~~Recirculated cooling water systems, which become contaminated through repair work or otherwise, shall be properly treated and tested before being returned to use.~~ Freezing point depressants and other chemical additives, when used in recirculating cooling water systems, shall be non-toxic under conditions of use. Propylene glycol and all additives shall be either USP Grade, Food Grade or generally-recognized-as-safe (GRAS). To determine if recirculated cooling water samples have been taken at the frequency established in this Item, the interval shall include the designated six (6) month period plus the remaining days of the month in which the sample is due.

2023 PMO, Section 7, 17p, page 117:

11. Recirculated cooling water, which is used in plate or tubular coolers and/or heat exchangers, including those systems in which a freezing point depressant is used, is from a safe source and protected from contamination. Such water shall be tested at least once every six (6) month period and shall comply with the Bacteriological Standards of Appendix G. of this *Ordinance*. Recirculated cooling water systems, which may become contaminated through repair work or otherwise, should be properly treated before being returned to use. Samples shall additionally be taken upon initial construction/installation and within thirty (30) days after extensive repairs or alterations. Samples shall be taken by the Regulatory Agency and examination shall be conducted

in an Official Laboratory. The Regulatory Agency shall physically inspect and re-sample the recirculated cooling water supply/system within thirty (30) days following an unacceptable

bacteriological result. Recirculated cooling water systems, which become contaminated through repair work or otherwise, shall be properly treated and tested before being returned to use. Freezing point depressants and other chemical additives, when used in recirculating systems, shall be non-toxic under conditions of use. Propylene glycol and all additives shall be USP Grade, Food Grade or GRAS. To determine if recirculated cooling water samples have been taken at the frequency established in this Item, the interval shall include the designated six (6) month period plus the remaining days of the month in which the sample is due.

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39th NATIONAL CONFERENCE ON INTERSTATE MILK SHIPMENTS

Proposal #:	107
Committee:	Single Serv
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

To define how many sample sets are required to be taken based on the manufacturing lines present in an IMS listed single service facility.

B. Reason for the Submission and Public Health Significance and/or Rationale Supporting the Submission

This proposal aims to clarify when a sample set is required to be taken at a single service facility in accordance with Appendix J, addressing current confusion stemming from vague language in the PMO. There are several interpretations of the existing guidelines: some believe a sample set must be taken from each individual machine on a manufacturing line, regardless of its size—so, for example, if there are five one-gallon blow-mold machines, a sample set would be needed for each. Others interpret the rule as requiring one sample set per line, but only for different sizes—so one sample set from a one-gallon blow-mold machine and another from a half-gallon blow-mold machine. Some take the approach of collecting just one sample set for all blow-mold machines, rotating between the lines and sizes.

The final approach, which suggests taking only one sample set per type of manufacturing line (e.g., one set for blow-molding, one for laminating, etc.), aligns more closely with sampling

practices of dairy products. Dairy product sampling does not require finished product testing from every filler in the plant; rather, a single sample set is collected and rotated across

different fillers and product sizes. Although individual regulatory agencies may enforce stricter rules, defining when a sample set is necessary based on the type of manufacturing line would help standardize expectations in the PMO. This proposal is supported by M-I-03-13, question #55, which states that if all containers come from the same blow-mold process (manufacturing line), only one sample set is needed per sampling event. If multiple sizes or machines are used, samples should be rotated accordingly.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
78, 339	2023 PMO <i>Section(s): 7 (12p)</i> <i>Appendix: J</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed change: PMO 12p (page 78)

c. When single-service containers and/or closures are fabricated in another plant that conforms to the Standards of Appendix J. of this *Ordinance* and the Regulatory Agency has information that they do comply, the Regulatory Agency may accept the containers and/or closures as being in conformance without additional testing. If there is reason to believe that containers and/or closures do not conform to the bacteriological standards, additional testing may be required. If containers and/or closures are fabricated in the milk plant, the Regulatory Agency shall collect, during any consecutive six (6) months, at least four (4) sample sets of containers with applied closures, as defined in Appendix J. of this *Ordinance* from each manufacturing line, as defined in Appendix J. of this *Ordinance*, with rotation in sampling occurring between like manufacturing lines, in at least four (4) separate months, except when three (3) months show a month containing two (2) sampling dates separated by at least twenty (20) days, and analyze the sample sets at an Official, Commercial or Industry Laboratory, approved by the Milk Laboratory Control Agency specifically for the examinations required under Appendix J. of this *Ordinance*.

Proposed change: PMO Appendix J, Section C (page 339)

c. BACTERIAL STANDARDS AND EXAMINATION OF SINGLE-SERVICE CONTAINERS AND/OR CLOSURES

1. Paper stock shall meet the bacteriological standard of not more than two hundred fifty (250) colonies per gram as determined by the disintegration test. The paper stock supplier shall

certify that their paper stock was manufactured in compliance with this Standard. This applies only to the paper stock prior to lamination.

2. Where a rinse test can be used, the residual microbial count shall not exceed fifty (50) per container, except that in containers less than 100 mL, the count shall not exceed ten (10), or when using the swab test, not over fifty (50) colonies per fifty (50) cm² (one (1) per square

centimeter) of product-contact surface. For the sample set containing four (4) single-service containers and/or closures, taken at random on a given day, to be in compliance with the bacterial standards of Appendix J. of this *Ordinance* as cited above shall not have two (2) or more out of the four (4) samples making up the sample set exceeding the bacterial standard. All single-service containers and closures making up the sample set shall be free of coliform organisms.

3. During any consecutive six (6) months, at least four (4) sample sets shall be collected in at least four (4) separate months, except when three (3) months show a month containing two (2) sampling dates separated by at least twenty (20) days, and analyzed at an Official, Commercial or Industry Laboratory approved by the Milk Laboratory Control Agency specifically for the examinations required under these Standards. (Refer to Item 12p of this *Ordinance* for sampling of containers and closures in milk plants.)

NOTE: If the production of single-service containers and closures is not on a continuous monthly basis and; therefore, cannot meet this Section's sampling frequency requirement that during any consecutive six (6) months, at least four (4) sample sets shall be collected in at least four (4) separate months, except when three (3) months show a month containing two (2) sampling dates separated by at least twenty (20) days, then at least one (1) sample set shall be collected during each month of production.

4. When a single-service container or closure is made from one (1) or more component parts as defined in this document, only those final assembled products that may have product-contact surface(s), shall be sampled and tested for compliance with Section C.

5. A sample set from each manufacturing line, as defined in these Standards, with rotation in sampling occurring between like manufacturing lines, shall consist of a minimum of four (4) containers and/or closures, when the rinse test is used, or a minimum of four (4) 250 cm² areas of surface, when the swab test is used.

6. The following criteria pertain to manufacturers of pre-forms and bottles preformed at one (1) plant and molded at a second plant: a. The pre-forming plant shall be IMS Listed but sampling of the pre-forms is not required at this plant.

b. If the first pre-forming plant is also molding the containers into their final form, this plant shall be listed, and the containers shall be sampled at this plant.

c. If the second plant, where containers are molded into their final form, is a single-service manufacturer, this plant shall be listed, and the containers shall be sampled at this plant.

d. If the second plant is a milk plant where containers are molded into their final form, for use only in that milk plant, the milk plant listing is sufficient, but the containers shall be sampled at this plant.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	108
Committee:	Tech Eng
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

To allow use of an alarmed steam block to separate pipelines and equipment used to contain or conduct milk and/or milk products from tanks/silos and/or circuits containing cleaning and/or sanitizing solutions in for all types of products.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

The current wording of this section limits the use of steam blocks to only specific (HHST) products. This prevents the use of steam blocks designed for aseptic or near-aseptic applications in other pasteurized products. Removal of the qualifying phrase at the beginning of the paragraph would allow the use of steam blocks to separate milk and/or milk products from cleaning and/or sanitizing solutions for ALL products, including HTST products and HHST products that are processed and the equipment cleaned and/or chemically sanitized below the atmospheric boiling point of the milk or milk product or cleaning and/or sanitizing solutions.

Steam blocks have been successfully used for separation in aseptic and HHST applications for many years. While steam barriers are not normally used in HTST applications, there is no

public health reason that the use of steam blocks for separation should be limited to HHST applications.

Note that this proposal does not change any of the food safety related design requirements, including de-energizing the cleaning pump when a leak is detected.

Note also that I have received a request to supply a steam barrier for an HTST application and had to have the processor contact their regulatory authorities for clarification of this clause.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
86	2023 PMO <i>Section(s): 7 Item</i> 15p <i>Appendix:</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

Modify the 2023 PMO, page 86, Section 7 Item 15p.(B)1.c.

1. During processing, pipelines and equipment used to contain or conduct milk and/or milk products shall be effectively separated from tanks/silos and/or circuits containing cleaning and/or sanitizing solutions. This can be accomplished by:

- a. Physically disconnecting all connection points ... or
- b. Separation of all connection points between such circuits by ...
- c. ~~In the case of higher heat shorter time (HHST) pasteurized milk and milk products that are processed and the equipment cleaned and/or chemically sanitized above the atmospheric boiling point of the milk or milk product or cleaning and/or sanitizing solutions, the required separation between pipe lines and equipment, used to contain or conduct milk and milk products, and tanks or circuits containing cleaning and/or chemical sanitizing solutions, may be accomplished using~~ Use of an alarmed steam block(s), located between the milk and/or milk product and the cleaning and/or chemical sanitizing solutions if: , provided:
 - (1) The steam block is equipped with a visible steam trace that exits at the bottom of the steam block;
 - (2) The steam trace is equipped with a temperature sensor that is capable of differentiating between those temperatures that indicate steam exiting the steam

trace has not been exposed to liquid in the steam block and temperatures that will occur when liquid is present in the steam block; ...

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	109
Committee:	Scientific/ Yogurt Study Comm
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

This proposal aims to modify Item 16p, Administrative Procedures #2 of the 2023 Pasteurized Milk Ordinance (PMO) to allow for the practice of pasteurized cream addition to strained yogurt to adjust the fat level.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

In 2024, an NCIMS study committee was formed to examine the issue of pasteurization of skim milk and cream separately and subsequently adding the cream to the cultured and strained skim milk to adjust the fat level. As a result of the committee’s work, this proposal modifies Item 16p of the PMO to allow for the practice of the separate addition of pasteurized cream to strained non-fat yogurts to adjust the fat level.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
91	2023 PMO <i>Section(s): 7</i> <i>Appendix:</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

2023 PMO, Section 7, Item 16p, page 91:

2. All milk and/or milk products, i.e., milk solids, whey, nonfat dry milk, condensed milk, cream, skim milk, etc., eggs, egg products, cocoa, cocoa products, emulsifiers, stabilizers, vitamins and liquid sweeteners shall be added prior to pasteurization. ~~Provided, ingredients which may be added after pasteurization are those flavoring ingredients and other ingredients which have been found to be safe and suitable and which include:~~ except that pasteurized cream may be added to non-fat yogurt which has been mechanically strained to increase non-fat milk solids content through the removal of whey and water, provided the cream has been pasteurized in the same facility.

Provided, ingredients which may be added after pasteurization are those flavoring ingredients and other ingredients which have been found to be safe and suitable and which include:

- a. Ingredients permitted by the CFR standards of identity when considering a standardized milk and/or milk product;
- b. Fresh fruits and vegetables added to cultured milk and/or milk products provided the resultant equilibrium pH level (4.6 or below when measured at 24°C (75°F)) of the finished product is reached without undue delay and is maintained during the shelf life of the product.
- c. Ingredients subjected to prior heating or other technology, which has been demonstrated to FDA to be sufficient to destroy or remove pathogenic microorganisms;
- d. Ingredients having a aw of 0.85 or less;
- e. Ingredients having a high acid content (pH level of 4.6 or below when measured at 24°C (75°F)) or high alkalinity (pH level greater than 11 when measured at 24°C (75°F));
- f. Roasted nuts;
- g. Dry sugars and salts;
- h. Flavor extracts having a high alcohol content;
- i. Safe and suitable bacterial cultures and enzymes; and
- j. Ingredients, which have been found to be safe and suitable by FDA.

All such additions shall be made in a sanitary manner, which prevents the contamination of the added ingredient or the milk and/or milk product.

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39th NATIONAL CONFERENCE ON INTERSTATE MILK SHIPMENTS

Proposal #:	110
Committee:	Scientific
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

Clarify that the requirement for the addition of vitamins prior to pasteurization should only apply to Vitamins A and D. All other vitamin addition should be based on the PMO Section 7. Item 16p Administrative Procedures 2. Subitems a. – j.

B. Reason for the Submission and Public Health Significance and/or Rationale Supporting the Submission

The requirement for the pasteurization of vitamins can be traced back to at least M-I 86-16 Question 22. This was then added to the PMO with little modification at the 2005 NCIMS Conference.

While no real information has been identified as to why vitamins were on this list it is reasonable to estimate the focus was on Vitamins A and D as they were the only two vitamins that were fortified in milk. This is also at the beginning of the Dairy Initiatives and several things were implemented out of caution. As time has gone on, we have had many advances in processing and food safety technology, an example being filtration sterilization. Currently, a large percentage of the lactose free milk is produced by adding filter sterilized lactase to milk post heat step in aseptic and ESL processing. This is just one example of a process that could

be used to add vitamins other than A or D to milk post pasteurization and provide a safe product to the consuming public.

Item 16p Administrative Procedures 2. C. Page 91 “c. Ingredients subjected to prior heating or other technology, which has been demonstrated to FDA to be sufficient to destroy or remove pathogenic microorganisms;” Ensures those systems installed to treat ingredients other than milk is done under the oversight of the State Regulatory Agency with appropriate support from the FDA.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
91	2023 PMO <i>Section(s):7 Item 16p</i> <i>Appendix:</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change: 2023 PMO Section 7 Item 16p Administrative Procedures 2. Page 91

2. All milk and/or milk products, i.e., milk solids, whey, nonfat dry milk, condensed milk, cream, skim milk, etc., eggs, egg products, cocoa, cocoa products, emulsifiers, stabilizers, vitamins A and D and liquid sweeteners shall be added prior to pasteurization. Provided, ingredients which may be added after pasteurization are those flavoring ingredients and other ingredients which have been found to be safe and suitable and which include:

- a. Ingredients permitted by the CFR standards of identity when considering a standardized milk and/or milk product;
- b. Fresh fruits and vegetables added to cultured milk and/or milk products provided the resultant equilibrium pH level (4.6 or below when measured at 24°C (75°F)) of the finished product is reached without undue delay and is maintained during the shelf life of the product.
- c. Ingredients subjected to prior heating or other technology, which has been demonstrated to FDA to be sufficient to destroy or remove pathogenic microorganisms;
- d. Ingredients having a aw of 0.85 or less;
- e. Ingredients having a high acid content (pH level of 4.6 or below when measured at 24°C (75°F)) or high alkalinity (pH level greater than 11 when measured at 24°C (75°F));
- f. Roasted nuts;
- g. Dry sugars and salts;
- h. Flavor extracts having a high alcohol content;
- i. Safe and suitable bacterial cultures and enzymes; and

j. Ingredients, which have been found to be safe and suitable by FDA.

All such additions shall be made in a sanitary manner, which prevents the contamination of the added ingredient or the milk and/or milk product.

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39th NATIONAL CONFERENCE ON INTERSTATE MILK SHIPMENTS

Proposal #:	111
Committee:	Tech Eng
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

Proposal 117, which was accepted at the 2019 Conference, removed the use of the terms HTST and HHST to indicate the location of the FDD in a continuous pasteurization system from most of Item 16(p)(B) and (C) and Appendix H. This proposal makes the same changes to Appendix I, Item 16(p)(D) Table 4, one place in Item 16p.(B), and a few additional sections of Appendix H.

In general, the changes are:

“HTST” changed to “with FDD located immediately following the holding tube”.

“HHST” changed to “with FDD located after regenerator and/or cooler”.

“HTST” and “HHST” are not changed when they may refer to the product pasteurization time/temperature.

Note that multiple phrasings are used for continuous pasteurization system (e.g., pasteurizer or pasteurization system). This proposal does not change these in most places.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

While HTST (High-Temperature-Short-Time) or HHST (Higher-Heat-Shorter-Time) are listed in the Acronyms section of the PMO, there is not a formal definition of these terms. Both terms are in the definition of pasteurization tables (Definition RR) and are used throughout the PMO referring to temperature and time combinations. However, both are also used throughout the PMO to refer to systems with specific FDD locations (HTST = FDD immediately after the holding tube and HHST = FDD after the regenerator and/or cooler.) This means that there are four possible cases.

1. **HTST** holding time (≥ 15 seconds) with **HTST** configuration (FDD immediately after the holding tube),
2. **HHST** holding time (≤ 1 second) with **HHST** configuration (FDD after the regenerator and/or cooler),
3. **HTST** holding time (≥ 15 seconds) with **HHST** configuration (FDD after the regenerator and/or cooler), and
4. **HHST** holding time (≤ 1 second) with **HTST** configuration (FDD immediately after the holding tube).

While most systems fall into the first two cases (HTST/HTST and HHST/HHST), there are systems that fall into the other cases (HHST/HHST and HHST/HTST).

This use of both types of term for a pasteurizer can lead to confusion over which term applies for various sections of the PMO. The purpose of this proposal is to clarify the requirements that are based on the location of the FDD. There are no changes to the tests or other requirements. It also makes the Appendix I tests consistent with the sections of Item 16p. or Appendix H referenced for that test.

Note that the Ad-Hoc committee which submitted Proposal 117 to the 2019 Conference decided that their charge did NOT include changes to Appendix I and that any changes should be addressed in a subsequent proposal. This proposal responds to that decision.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
xvi, xvii, 98, 111, 227-229, 232-235, 255, 273-277, 291, 293, 295-297, 299-313	2023 PMO <i>Section(s):</i> TOC, 7 <i>Appendix:</i> H, I		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

Modify the 2023 PMO, page xvi, Table of Contents – Figures

- Figure 52. Logic Diagram: HTST Flow-Diversion Device, Divert Valve Stem**
- Figure 53. Logic Diagram: HTST Flow-Diversion, Leak-Detect Valve Stem**
- Figure 54. Logic Diagram: HTST Safety Thermal Limit Recorder-Controller**
- Figure 55. Logic Diagram: HTST Timing Pump**
- Figure 56. Logic Diagram: HTST Booster Pump**

Modify the 2023 PMO, page xvii, Table of Contents

Table 4. Equipment Tests - Batch Pasteurizers and HTST and HHST Continuous Pasteurization Systems (Refer to Appendix I. of this *Ordinance*.)

Modify the 2023 PMO, page 98, Section 7 Item 16p.(B)2.b.(13)

(13) When switching to the “CIP” position, the FDD shall move to the divert position and shall remain in the diverted-flow position for at least ten (10) minutes, regardless of temperature, and for HTST pasteurization systems with the FDD located immediately following the holding tube the booster pump cannot run during this ten (10) minute time delay.

Modify the 2023 PMO, page 111, Section 7 Item 16p.(D)2. Table 4

Table 4. Equipment Tests - Batch Pasteurizers and HTST and HHST <u>Continuous Pasteurization Systems</u> (Refer to Appendix I. of this <i>Ordinance</i> .)		
1.	Vat, HTST and HHST <u>continuous pasteurization system</u> indicating and airspace thermometers	Temperature accuracy
2.	Vat, HTST and HHST <u>continuous pasteurization system</u> recording thermometer	Temperature accuracy
3.	Vat, HTST and HHST <u>continuous pasteurization system</u> recording thermometer	Time accuracy
4.	Vat, HTST and HHST <u>continuous pasteurization system</u> indicating and recording thermometer	Recording vs. Indication Thermometer
5.1	HTST and HHST <u>Continuous pasteurization system</u> FDD	Leakage pass FDD
5.2	HTST and HHST <u>Continuous pasteurization system</u> FDD	FDD freedom of movement
5.3	HTST and HHST <u>Continuous pasteurization system</u> FDD	Device assembly (single stem)
5.4	HTST and HHST <u>Continuous pasteurization system</u> FDD	Device assembly (dual stem)
5.5	HTST <u>Continuous pasteurization system with FDD located immediately following the holding tube</u> FDD	Manual diversion
5.6	HTST and HHST <u>Continuous pasteurization system</u> FDD	Response time
5.7	HTST and HHST <u>Continuous pasteurization system</u> FDD	Time delay (inspect)
5.8	HTST and HHST <u>Continuous pasteurization system</u> FDD	Time delay (CIP)
5.9	HTST <u>Continuous pasteurization system with FDD located immediately following the holding tube</u> FDD	Time delay (leak-detect flush)
6.	Vat leak-protector valves	Leakage
7.	HTST <u>Continuous pasteurization system with FDD located immediately following the holding tube</u> indicating thermometers	Response time
8.	HTST <u>Continuous pasteurization system with FDD located immediately following the holding tube</u> recording thermometers	Response time

9.1	<u>HTST Continuous pasteurization system with FDD located immediately following the holding tube pressure switches</u>	Regenerator pressures
9.2.1	<u>HTAT and HHST Continuous pasteurization system differential pressure controllers</u>	Calibration
9.2.2	<u>HTST Continuous pasteurization system with FDD located immediately following the holding tube differential pressure controllers</u>	Regenerator pressure
9.2.3	<u>HTST* and HHST Continuous pasteurization system with FDD located downstream of the regenerator and/or cooler section differential pressure controllers</u>	Regenerator pressure
9.3.1	<u>HTST Continuous pasteurization system with FDD located immediately following the holding tube booster pump/FDD</u>	Inter-wiring check
9.3.2	<u>HTST Continuous pasteurization system with FDD located immediately following the holding tube booster pump /timing pump</u>	Inter-wiring check
10.1	<u>HTST Continuous pasteurization system with FDD located immediately following the holding tube FDD</u>	Temperature cut-in/cut out
10.2	<u>HTST* and HHST Continuous pasteurization system with FDD located downstream of the regenerator and/or cooler section FDD divert system (indirect heat)</u>	Temperature cut-in/cut out
10.3	<u>HTST* and HHST Continuous pasteurization system with FDD located downstream of the regenerator and/or cooler section FDD divert system (direct heat)</u>	Temperature cut-in/cut out
11.1	<u>HTST continuous pasteurization system holding tubes/timing pumps (except magnetic flow meter based timing systems (MFMBTS))</u>	Holding time
11.2.a	<u>HTST continuous pasteurization system holding tubes/MFMBTS</u>	Holding time
11.2.b	<u>HTST and HHST Continuous pasteurization system MFMBTS</u>	Flow alarm
11.2.c	<u>HTST and HHST Continuous pasteurization system MFMBTS</u>	Loss of signal/low flow
11.2.d	<u>HTST continuous pasteurization system MFMBTS</u>	Flow rate cut-in/cut-out
11.2.e	<u>HTST continuous pasteurization system MFMBTS</u>	Time delay
11.2.f	<u>All continuous pasteurization system MFMBTS</u>	High flow alarm response time

11.3	HHST <u>continuous pasteurization system</u> holding tubes indirect heat	Holding time
11.4	HHST <u>continuous pasteurization system</u> holding tubes direct injection heat	Holding time
11.5	HHST <u>continuous pasteurization system</u> holding tubes direct infusion heat/ <u>orifice timing</u>	Holding time
11.6	HHST <u>continuous pasteurization system</u> holding tubes direct infusion heat/ <u>MFMBTS</u>	<u>Holding time</u>
12.1	HTST* and HHST <u>Continuous pasteurization system with FDD located downstream of the regenerator and/or cooler section</u> indirect heating	Sequence logic
12.2	HTST* and HHST <u>Continuous pasteurization system with FDD located downstream of the regenerator and/or section</u> direct heating	Sequence logic
13.	HHST <u>continuous pasteurization system</u>	Pressure in holding tube
14.	HTST* and HHST <u>Continuous pasteurization system</u> using direct injection heating	Differential pressure across injector
15.	HTST and HHST <u>Continuous pasteurization system</u> (all electronic controls)	Electro-Magnetic Interference

* ~~For HTST continuous pasteurization systems with the FDD located downstream of the regenerator and/or cooler section.~~

Modify the 2023 PMO, page 227, Appendix H

I. CONTINUOUS FLOW PASTEURIZATION

OPERATION OF HTST PASTEURIZATION SYSTEMS WITH THE FDD LOCATED IMMEDIATELY FOLLOWING THE HOLDING TUBE

~~HTST pasteurization~~ Pasteurization is important to the dairy industry because of the operating efficiencies that it affords. Properly operated, these units allow a high volume of production in a minimum of processing space.

The ability of ~~HTST~~ pasteurizers to assure a safe, finished milk and/or milk product hinges on the reliability of the time-temperature-pressure relationships that must prevail whenever the system is in operation. It is important that the milk plant operator understand the ~~HTST~~ pasteurization process in order to maintain proper surveillance over the equipment. A basic flow pattern is described below:

1. Cold raw milk and/or milk product, in a constant-level supply tank, is drawn into the regenerator section of the ~~HTST~~ pasteurizer.

...

3. The raw milk and/or milk product, still under suction, passes through a positive-displacement- timing pump that delivers it under pressure through the rest of the HTST pasteurization system.

Modify the 2023 PMO, page 228-229, Appendix H

HTST PASTEURIZERS WITH THE FDD LOCATED IMMEDIATELY FOLLOWING THE HOLDING TUBE EMPLOYING MILK AND/OR MILK PRODUCT-TO-MILK OR MILK PRODUCT REGENERATORS WITH BOTH SIDES CLOSED TO THE ATMOSPHERE

Section 7., Item 16p(C) of this *Ordinance* establishes standards for regenerators.

...

When a raw milk and/or milk product booster pump is incorporated into the HTST pasteurization system, Item 16p(C), **ADMINISTRATIVE PROCEDURES #5** of this *Ordinance* requires, in part, that automatic means shall be provided to assure, at all times, the required pressure differential between raw and pasteurized milk and/or milk product in the regenerator, before the booster pump can operate.

Modify the 2023 PMO, page 232-234, Appendix H

I. CONTINUOUS FLOW PASTEURIZATION

MAGNETIC FLOW METER BASED TIMING SYSTEMS WITHIN CONTINUOUS FLOW PASTEURIZATION SYSTEMS

Components: ...

7. For HTST continuous pasteurization systems with the FDD located immediately following the holding tube, a sanitary check valve or normally closed automatically controlled sanitary valve shall be installed with the magnetic flow meter to prevent a positive pressure in the raw milk and/or milk product side of the regenerator whenever a power failure, shutdown or flow-diversion occurs.

NOTE: This provision is not applicable to HHST continuous pasteurization systems with the FDD located downstream of the regenerator and/or cooler.

...

Placement of Components: ...

2. For HTST continuous pasteurization systems with the FDD located immediately following the holding tube, when a sanitary check valve or normally closed automatically controlled sanitary valve, as described in #7 above, is used with a variable or constant speed flow

promoting device, it shall be located downstream of the last regenerator outlet and upstream of the holding tube.

NOTE: This provision is not applicable to ~~HTST~~ continuous pasteurization systems with the FDD located downstream of the regenerator and/or cooler.

Modify the 2023 PMO, page 235, Appendix H

THE USE OF VACUUM BREAKERS ON ~~HTST~~ CONTINUOUS FLOW PASTEURIZATION SYSTEMS WITH THE FDD LOCATED IMMEDIATELY FOLLOWING THE HOLDING TUBE

Vacuum breakers are often used on ~~HTST~~ continuous flow pasteurization systems with the FDD located immediately following the holding tube to help maintain proper pressure relationships in milk-to-milk regenerator sections, or to prevent a negative pressure between the FDD and any downstream flow-promoting device. The use of vacuum breakers on ~~HTST~~ continuous flow pasteurization systems with the FDD located immediately following the holding tube is allowed provided the following conditions are met:

1. Vacuum breakers shall open to the atmosphere when subject to a negative pressure.
2. The pasteurized milk and/or milk product, between its outlet from the regenerator and the nearest point downstream open to the atmosphere, shall rise to a vertical elevation of 30.5 centimeters (12 inches) above the highest raw milk and/or milk product level, downstream from the constant-level tank, and shall be open to the atmosphere at this or a higher elevation.

Spring-to-close vacuum breakers are not allowed.

Modify the 2023 PMO, page 255, Appendix H

IV. THERMOMETER SPECIFICATIONS

...

INDICATING THERMOMETERS LOCATED ON PASTEURIZATION PIPELINES

...

2. Digital:

- a. No more than 0.2°C (0.5°F) drift over three (3) months use on a ~~HTST~~ pasteurization system compared to a certified temperature source.

Modify the 2023 PMO, pages 273-277, Appendix H

COMPUTERIZED SYSTEMS LOGIC DIAGRAMS

PASTEURIZER WITH FDD LOCATED IMMEDIATELY AFTER THE HOLDING TUBE

Figure 52. Logic Diagram: HTST Flow-Diversion Device, Divert Valve Stem

Figure 53. Logic Diagram: HTST Flow-Diversion, Leak-Detect Valve Stem

Figure 54. Logic Diagram: HTST Safety Thermal Limit Recorder-Controller

Figure 55. Logic Diagram: HTST Timing Pump

Figure 56. Logic Diagram: HTST Booster Pump

Modify the 2023 PMO, pages 291, Appendix I

**TEST 5.
FDD - PROPER ASSEMBLY AND FUNCTION**

Reference: Item 16p.(B) and (D) of this *Ordinance*.

Application: 5.1 to 5.4 and 5.6 to 5.8 below apply to all FDDs used with continuous-flow pasteurization systems. 5.5 and 5.9 below apply only to FDDs used with HTST pasteurization systems with FDD located immediately following the holding tube.

Modify the 2023 PMO, pages 293, Appendix I

5.5 MANUAL DIVERSION

Application: To continuous-flow pasteurization systems with FDD located immediately following the holding tube.

Apparatus: No supplementary materials required.

Method: Observe that the appropriate responses in **Procedures** 1 and 2, as required below, have occurred during the activation and deactivation of manual diversion.

Procedure:

1. With the HTST pasteurization system in operation and the FDD in the forward-flow position, activate the manual divert control.
 - a. The FDD shall assume the diverted-flow position;
 - b. Any flow-promoting device downstream from the FDD, which is capable of causing flow through the FDD, shall be de-energized; and
 - c. Any separator and/or vacuum source downstream from the FDD shall be effectively valved-out.
2. If a booster pump is installed in the HTST pasteurization system and the pasteurization system is in operation with the FDD in the forward-flow position:
 - a. Activate the manual divert control. The booster pump shall be de-energized. The required minimum pressure differential of at least 6.9 kPa (1 psi) between raw milk and/or milk product and pasteurized milk and/or milk product in the regenerator shall be maintained.

b. After the raw pressure reaches zero (0) psi, deactivate the manual divert control and observe that the required minimum pressure differential of at least 6.9 kPa (1 psi) between raw milk and/or milk product and pasteurized milk and/or milk product in the regenerator has been maintained.

Action: If the above described required actions do not occur, or the required pressure differential between raw and pasteurized milk and/or milk product is not maintained, the ~~HTST~~ pasteurization system shall be immediately reviewed and evaluated ...

Modify the 2023 PMO, pages 295, Appendix I

5.8 CIP TIME DELAY RELAY

Application: To all continuous-flow pasteurization systems in which it is desired to run any flow-promoting devices during the CIP cycle.

Criteria: When the mode switch on the FDD is moved from “Process” to “CIP”, the FDD shall move immediately to the diverted-flow position. It shall remain in the diverted-flow position for at least ten (10) minutes, with all public health controls required in the “Process” mode functioning, before starting its normal cycling in the “CIP” mode. In ~~HTST~~ pasteurization systems with the FDD located immediately following the holding tube, the booster pump shall be de-energized, separators between raw regenerator sections and separators and/or vacuum sources downstream of the FDD, shall be effectively valved-out of the pasteurization system during the required ten (10) minute time delay.

Modify the 2023 PMO, pages 296, Appendix I

5.9 LEAK-DETECT VALVE FLUSH – TIME DELAY

Application: To ~~HTST~~ continuous-flow pasteurization systems with FDD located immediately following the holding tube in which the space between the divert and leak-detect valves is not self-draining when the FDD is in the diverted-flow position.

...

Procedure:

1. Move the FDD from the diverted-flow position to the forward-flow position either by:
 - a. Raising the temperature above the cut-in set point; or

NOTE: The appropriate temperature sensing elements may be placed in a water, oil or other suitable media bath to simulate the normal pasteurization temperature within the holding tube as an alternative to heating the water in the pasteurization system above the minimum legal pasteurization temperature.

- b. Operating the ~~HTST~~ pasteurization system above the cut-in temperature in manual divert mode and then deactivate the manual divert control.

Modify the 2023 PMO, pages 297, Appendix I

TEST 7.

INDICATING THERMOMETERS LOCATED WITHIN ~~HTST~~ PASTEURIZATION SYSTEMS WITH FDD LOCATED IMMEDIATELY FOLLOWING THE HOLDING TUBE – THERMOMETRIC RESPONSE

Reference: Item 16p.(B) and (D) of this *Ordinance*.

Application: To all ~~HTST~~ pasteurization systems, except for those in which the FDD is located downstream of the pasteurized regenerator section(s) and/or the final cooler section.

Modify the 2023 PMO, pages 299, Appendix I

TEST 8.

TEMPERATURE RECORDER-CONTROLLER THERMOMETERS – THERMOMETRIC RESPONSE

Reference: Item 16p.(B) and (D) of this *Ordinance*.

Application: To all ~~HTST~~ continuous-flow pasteurization systems, except for those in which the FDD is located downstream of the pasteurized regenerator section(s) and/or the final cooler section.

Modify the 2023 PMO, pages 300, Appendix I

TEST 9.

REGENERATOR PRESSURE CONTROLS

Reference: Item 16p.(C) and (D) of this *Ordinance*.

9.1 PRESSURE SWITCHES

Application: To all pressure switches controlling the operation of a booster pump on ~~HTST~~ pasteurization systems with FDD located immediately following the holding tube and a regenerator section(s).

Modify the 2023 PMO, pages 301-302, Appendix I

9.2 DIFFERENTIAL PRESSURE CONTROLLER

Application: Test 9.2.1 applies to all differential pressure controllers used to control the operation of booster pumps within ~~HTST~~ pasteurization systems with FDD located immediately following the holding tube or used to control the operation of FDDs using plate type or double/triple tube type heat exchangers in continuous-flow pasteurization systems with the FDD located downstream of the pasteurized regenerator section(s) and/or the final cooler section.

Test 9.2.2 applies only to ~~HTST~~ pasteurization systems with the FDD located immediately following the holding tube.

Test 9.2.3 applies to the testing of plate type and double tube/triple tube type heat exchangers in continuous-flow pasteurization systems in which the differential pressure controller is used to control the operation of the FDD.

Frequency: Upon installation; at least once each three (3) months thereafter; whenever the differential pressure controller is adjusted or repaired; or whenever the regulatory seal has been broken.

Criteria: The booster pump shall not operate, or the pasteurization system shall not operate in forward-flow, unless the milk and/or milk product pressure in the pasteurized side of the regenerator section(s) is at least 6.9 kPa (1 psi) greater than the milk and/or milk product pressure in the raw side of the regenerator section(s). When the differential pressure controller is used to control the FDD on ~~HHST~~ pasteurization systems with the FDD located downstream of the pasteurized regenerator section(s) and/or the final cooler section, and improper pressure occurs in the regenerator section(s), the FDD shall move to the diverted-flow position and remain in diverted-flow until the proper pressures are re-established in the regenerator section(s) and all milk and/or milk product-

contact surfaces between the holding tube and the FDD have been held at or above the minimum legal pasteurization temperature, continuously and simultaneously for at least the required time.

...

Modify the 2023 PMO, pages 302-303, Appendix I

9.2.2 ~~HTST~~—INTERWIRING OF THE DIFFERENTIAL PRESSURE CONTROLLER WITH THE BOOSTER PUMP

Application: To continuous-flow pasteurization systems with FDD located immediately following the holding tube.

Method: Determine if the booster pump stops running when the pressure differential is not properly maintained in the regenerator section(s).

Procedure:

302

1. Connect the pasteurized or raw regenerator section differential pressure controller sensing element to a testing tee with the other end of the testing tee capped.

NOTE: If there is water in the ~~HTST~~ pasteurization system, ensure that the recorder-controller sensing element and the pasteurized or raw regenerator section differential pressure controller sensing element ports are capped before the timing pump is turned on.

Modify the 2023 PMO, pages 303, Appendix I

9.2.3 INTERWIRING OF THE DIFFERENTIAL PRESSURE CONTROLLER WITH THE FDD ~~IN AN HHST CONTINUOUS-FLOW PASTEURIZATION SYSTEM~~

Application: To all differential pressure controllers used to control the operation of FDDs on ~~HHST~~ continuous-flow pasteurization systems with the FDD located downstream of the pasteurized regenerator section(s) and/or final cooler section.

Modify the 2023 PMO, pages 304-305, Appendix I

9.3 ADDITIONAL HTST PASTEURIZATION SYSTEM TESTS FOR BOOSTER PUMPS – INTERWIREING

Application: To all booster pumps used for HTST pasteurization systems where the FDD is located immediately downstream of the holding tube, except that Test 9.3.2 is not required to be performed on magnetic flow meter based timing systems.

...

9.3.1 BOOSTER PUMPS - INTERWIRED WITH FDD

Method: Determine if the booster pump stops running by dropping the temperature and causing the FDD to divert.

Procedure:

1. Connect the pasteurized regenerator section(s) differential pressure controller sensing element to a testing tee with the other end of the testing tee capped.

NOTE: If there is water in the HTST pasteurization system, ensure that the recorder-controller sensing element and the pasteurized regenerator section(s) differential pressure controller sensing element ports are capped before the timing pump is turned on.

...

9.3.2 BOOSTER PUMPS - INTERWIRED WITH THE TIMING PUMP

Method: Determine if the booster pump stops running when the timing pump is not running.

Procedure:

1. Connect the pasteurized regenerator section(s) differential pressure controller sensing element to a testing tee with the other end of the testing tee capped.

NOTE: If there is water in the HTST pasteurization system, ensure that the recorder-controller sensing element and the pasteurized regenerator section(s) differential pressure controller sensing element ports are capped before the timing pump is turned on.

Modify the 2023 PMO, pages 306-308, Appendix I

TEST 10.

MILK OR MILK PRODUCT-FLOW CONTROLS AND THE MILK OR MILK PRODUCT TEMPERATURE AT CUT-IN AND CUT-OUT

...

10.1 HTST PASTEURIZATION SYSTEMS

Application: To all recorder-controllers used in connection with HTST pasteurization systems, except those in which the FDD is located downstream from the pasteurized regenerator section(s) and/or final cooler section.

...

10.2 PASTEURIZATION SYSTEMS USING INDIRECT HEATING

Application: To all ~~HHST and~~ HTST continuous-flow pasteurization systems with the FDD located downstream of the pasteurized regenerator section(s) and/or the final cooler section using indirect heating.

...

10.3 PASTEURIZATION SYSTEMS USING DIRECT HEATING

Application: To all ~~HHST and~~ HTST continuous-flow pasteurization systems with the FDD located downstream of the pasteurized regenerator section(s) and/or the final cooler section using direct heating.

Modify the 2023 PMO, pages 309-313, Appendix I

TEST 11.

CONTINUOUS-FLOW PASTEURIZATION SYSTEM HOLDING TUBES – PASTEURIZATION HOLDING TIME

(Continuous-flow pasteurization system holding tubes shall be tested for pasteurization holding times by one (1) of the following applicable Tests.)

Reference: Item 16p.(B) and (D) of this *Ordinance*.

11.1 HTST PASTEURIZATION SYSTEMS

(Except for magnetic flow meter-based timing systems.)

Application: To all HTST continuous-flow pasteurization systems employing a pasteurization holding time of fifteen (15) seconds or longer, except for magnetic flow meter-based timing systems.

...

11.2A CONTINUOUS-FLOW PASTEURIZATION SYSTEMS UTILIZING A MAGNETIC FLOW METER BASED TIMING SYSTEM – PASTEURIZATION HOLDING TIME

Application: To all HTST continuous-flow pasteurization systems employing a pasteurization holding time of fifteen (15) seconds or longer with a magnetic flow meter based timing system, used in lieu of a timing pump.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	112
Committee:	Tech Eng
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

Merge 16(p)(B)2.b.(7) and (12) by eliminating (12) and moving steam barrier sentence from (12) to (7).

This proposal is based on discussions and recommendations of the NCIMS Proposal 102 Committee.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

16(p)(B)2.b.(7) and (12) both cover location of the FDD downstream from the regenerator and/or cooler section. Paragraph (12) only applies to HHSTs processing ultra-pasteurized products, while paragraph (7) applies to all continuous pasteurizers including those covered by paragraph (12). They have the same requirements and are therefore redundant. The steam barrier sentence in paragraph (12) applies to all pasteurizers and belongs in paragraph (7).

There is no change of public health significance.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
98	2023 PMO <i>Section(s): 7 Item</i> 16p.(B) <i>Appendix:</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

PMO Section 7, Item 16p.(B)2.b. (page 98 – FDDs (7) and (12)

(6) The FDD shall be located downstream from the holding tube. The flow-control sensor shall be located in the milk and/or milk product line not more than 46 centimeters (18 inches) upstream from the inlet of the FDD.

(7) The FDD may be located downstream from the regenerator and/or cooler section, provided, that the system complies with the criteria for downstream FDDs in Appendix H of this *Ordinance*. Said FDD may alternatively be a system of the “Steam-Block Type” as described in Appendix H. of this *Ordinance*.

...

~~(12) In the case of HHST pasteurizing systems utilizing temperatures and holding times to meet the definition of ultra pasteurization (UP) of this *Ordinance*, the FDD may be located downstream of the regenerator and/or cooler section. Said FDD may alternatively be a system of the “Steam-Block Type” as described in Appendix H. of this *Ordinance*.~~

~~(13)~~ (12) When switching to the “CIP” position, the FDD shall move to the divert position and shall remain in the diverted-flow position for at least ten (10) minutes, regardless of temperature, and for HTST pasteurization systems the booster pump cannot run during this ten (10) minute time delay.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	113
Committee:	Tech Eng
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

This proposal clarifies that the “off” time delay for flow promoting devices through the travel time of the FDD applies to both pasteurizers with a timing pump and pasteurizers with a magnetic flow meter based timing system (MFMBTS).

This proposal is based on discussions and recommendations of the NCIMS Proposal 102 committee.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

The current wording of the PMO specifies that the timing pump may have a one (1) second maximum “off” time delay to maintain the flow promoting device in the “on” position through the travel time of the FDD when moving from forward flow to divert. This is appropriate and practical to avoid turning pumps off and back on rapidly each time a pasteurizer diverts. Rapid on-off-on changes can fault a pump motor’s variable frequency drive and many pump motors take longer than the maximum allowable travel time of the FDD of one (1) second to wind down to a complete stop.

The purpose of this proposal is to clarify that this one (1) second maximum “off” time delay also applies to the flow promoting devices of a MFMBTS. Pasteurizers with a MFMBTS do not have a timing pump and instead rely on a flow meter for timing. This time delay clause should also apply to the flow promoting devices of a MFMBTS for all the same reasons it applies to a timing pump.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
98	2023 PMO <i>Section(s):</i> 16p.(B) <i>Appendix:</i> -		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

PMO Item 16p.(B)2.b.(10) (page 98) Continuous-Flow Pasteurization

(10) ~~For the timing pump,~~ a A one (1) second maximum “off” time delay is allowed to maintain the flow-promoting ~~device~~ devices in the “on” position through the travel time of the FDD.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	114
Committee:	Tech Eng
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

Revise the UP thermal limit controller paragraph (15p.(B)2.c.(2)) to be grammatically correct and improve clarity.

This proposal is based on discussions and recommendations of the NCIMS Proposal 102 Committee.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

The current wording is not a sentence, but a series of run-on clauses. In addition to correcting the grammar, this proposal increases clarity by reducing the length of each sentence without removing any requirements.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
99	2023 PMO Section(s): 7 Item 16p.(B) Appendix:		2023 EML
	2023 MMSR		Forms Form Number:
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

PMO Section 7 Item 15p.(B)2.c.(2) (page99)

(2) For pasteurization systems used for the processing of milk and/or milk products labeled as UP, it is not necessary to set and seal the thermal-limit-controller at or above 138°C (280°F). ~~Also, provided that these~~ These systems shall meet all the public health control requirements for HHST pasteurization systems, ~~and that the~~. The recorder-controller chart shows shall show that the UP milk and/or milk product has been processed at a minimum temperature of 138°C (280°F), and ~~has the holding tube shall have been~~ verified by the Regulatory Agency to have a calculated holding time of at least two (2) seconds. A seal, if required, shall be applied by the Regulatory Agency after the equipment has been tested, and shall not be ~~re-moved~~ removed without immediately notifying the Regulatory Agency. The system shall be so designed that no milk and/or milk product can be bypassed around the control sensors, which shall not be removed from their proper position during the pasteurization process. For these pasteurization systems, daily measurement by the operator of the cut-in and cut-out temperatures is not required.

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39th NATIONAL CONFERENCE ON INTERSTATE MILK SHIPMENTS

Proposal #:	115
Committee:	Tech Eng
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

This proposal modifies the Magnetic Flow Meter Based Timing System (MFMBTS) sections of the PMO to exempt the requirements for a high flow switch and the associated sequence logic and testing when the thermal process (cut-out temperature and holding time) is significantly above the requirements (holding time by a factor of 10) for food safety (pasteurization).

This proposal is based on discussions and recommendations of the NCIMS Proposal 102 Committee.

B. Reason for the Submission and Public Health Significance and/or Rationale Supporting the Submission

Some continuous pasteurization systems operate at a thermal process (cut-out temperature and holding time) that is significantly above that required for pasteurization (food safety) of the product. The cut-out temperature of these systems is typically sealed at or above the temperatures specified in the PMO for HHST products. These systems cannot generate a flow rate that would yield a holding time less than the holding time required for pasteurization at the cut-out temperature.

This proposal exempts the requirement for a high-flow switch when the cut-out temperature is 194°F or higher (HHST pasteurization) and the holding tube length is at least ten (10) times the minimum length required at the cut-out temperature. This would yield a holding time that is ten times the holding time needed to achieve pasteurization (food safety).

For example, a system which operates at a cut-out temperature of 212°F and 100 GPM would require a holding tube that is at least 1.2 inches long for an indirect system or 1.33 inches long for a direct system. To meet the proposed criteria to be exempt from the high flow switch requirement, the holding tube would have to be at least 12 inches long for an indirect system or 13.3 inches long for a direct system. Since the holding tube length is at least ten (10) times the minimum length required at the cut-out temperature, the system would have to operate at more than 1000 GPM to be held for less than the minimum holding time required for pasteurization. To operate the system at that flow would require a pressure drop approximately 100 times the system design pressure drop.

This proposal does not change the requirements for holding tube design and testing, the use of a flow meter, recorder and low/no flow switch or any other requirement.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
107, 233, 315, 317, 318, 319	2023 PMO <i>Section(s): 7</i> <i>Appendix: H & I</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

PMO Section 7 Item 16p.(D)1.c. (page 107) – Pasteurization Records, Equipment Tests and Examinations

- c. Continuous-Flow Pasteurization Systems with Magnetic Flow Meter Based Timing Systems:** Flow rate recording charts shall be capable of continuously recording flow at the flow alarm set point and at least 19 liters (5 gallons) per minute higher than the high flow alarm setting. Flow rate recording charts shall contain all the information specified in Subitem a. above, except (3), (4), (5), (6), and (7), and in addition, shall include the following:
- (1) A continuous record of the status of the high and low-flow/loss of signal alarms; and
 - (2) A continuous record of the flow rate.

NOTE: When the cut-out temperature is set for 194°F or higher and the holding tube length is at least ten (10) times the minimum length required at the cut-out temperature, the flow rate recording chart shall be capable of continuously recording flow at the holding tube design rate at least 38 liters (10 gallons) per minute higher than the holding tube design flow rate and recording the status of the high flow alarm is not required.

PMO Appendix H (page 233) – MFMBTS Components 4 & 6

4. A flow alarm, with an adjustable set point, shall be installed within the system which shall automatically cause the FDD to move to the divert position whenever excessive flow rate causes the milk and/or milk product holding time to be less than the legal holding time for the pasteurization process being used. The flow alarm shall be tested by the Regulatory Agency in accordance with the procedures of Appendix I., Test 11, 2.A. and B. of this *Ordinance* at the frequency specified. The flow alarm adjustment shall be sealed.

NOTE: Test 11, 2.A is not applicable to HHST pasteurization systems.

NOTE: When the cut-out temperature is set for 194°F or higher and the holding tube length is at least ten (10) times the minimum length required at the cut-out temperature, the high flow alarm in this paragraph is not required and Test 11.2B, 11.2D and 11.2F are not applicable.

6. For HTST pasteurization systems, when the legal flow rate has been reestablished, following an excessive flow rate, a time delay shall be instituted, which shall prevent the FDD from assuming the forward-flow position for at least a minimum of fifteen (15) or twenty-five (25) seconds depending upon the product being pasteurized and the temperature being utilized. The time delay shall be tested and sealed by the Regulatory Agency.

For HHST pasteurization systems, when the legal flow rate has been reestablished, following an excessive flow rate, a time delay at least as long as the legal holding time shall be instituted, which shall prevent the FDD from assuming the forward-flow position until at least the legal holding time within the holding tube has been reestablished. In the case of HHST systems with the FDD located after the final cooler, this time delay shall be built into the sequence logic that requires all conditions for legal pasteurization to be satisfied and that legal pasteurization temperature exists from the holding tube to the FDD, before the FDD can assume the forward-flow position.

NOTE: When the cut-out temperature is set for 194°F or higher and the holding tube length is at least ten (10) times the minimum length required at the cut-out temperature, the flow rate sequence logic in this paragraph is not required and Test 11.2E is not applicable. The temperature sequence logic is still required.

PMO Appendix I (page 315) – Test 11.2B

11.2B CONTINUOUS-FLOW PASTEURIZATION SYSTEMS UTILIZING A MAGNETIC FLOW METER BASED TIMING SYSTEM – HOLDING TUBES AND HIGH FLOW ALARM

Application: To all continuous-flow pasteurization systems using a magnetic flow meter based timing system, in lieu of a timing pump, except systems where the cut-out temperature is set for 194°F or higher and the holding tube length is at least ten (10) times the minimum length required at the cut-out temperature.

PMO Appendix I (page 317) – Test 11.2D

11.2D CONTINUOUS-FLOW PASTEURIZATION SYSTEMS UTILIZING A MAGNETIC FLOW METER BASED TIMING SYSTEM – HOLDING TUBES AND FLOW RATE CUT-IN AND CUT-OUT

Application: To all HTST continuous-flow pasteurization systems using a magnetic flow meter- based timing system, in lieu of a timing pump, except systems where the cut-out temperature is set for 194°F or higher and the holding tube length is at least ten (10) times the minimum length required at the cut-out temperature.

PMO Appendix I (page 318) – Test 11.2E

11.2E CONTINUOUS-FLOW PASTEURIZATION SYSTEMS UTILIZING A MAGNETIC FLOW METER BASED TIMING SYSTEM – HOLDING TUBES AND TIME DELAY

Application: To all HTST continuous-flow pasteurization systems with a FDD located at the end of the holding tube that use a MFMBTS, in lieu of a timing pump, except systems where the STLR is set for 194°F or higher and the holding tube length is at least ten (10) times the minimum length required at the cut-out temperature.

PMO Appendix I (page 319) – Test 11.2F

11.2 F CONTINUOUS-FLOW PASTEURIZATION SYSTEMS UTILIZING A MAGNETIC FLOW METER BASED TIMING SYSTEM - HIGH FLOW ALARM RESPONSE TIME

Application: To all continuous-flow pasteurization systems using a magnetic flow meter-based timing system, in lieu of a timing pump, except systems where the STLR is set for 194°F or higher and the holding tube length is at least ten (10) times the minimum length required at the cut-out temperature.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	116	
Committee:		
New Procedure		
Procedure Change		
Const./Bylaws Change		

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

Dairy plant employees can test and temporarily seal pasteurizers when they have met conditions outlined in 16p. (D) 2. a-h. Letter c states the individual must conduct all pasteurization control tests in the presence of a regulatory official within the past year. We would like this changed to have the test conducted with the regulatory official within the last two years.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

Regulatory Officials spend a lot of time with dairy plant employees when they are reviewing and conducting pasteurization control tests. This can become burdensome to the inspector and the plant employee. Other evaluations, such as the dairy plant sampler, industry plant sampler and the bulk milk hauler/sampler, in the PMO are conducted at least once every 24 months. This change would align with these evaluations and be more consistent with the PMO.

C. Proposed Solution

Page Number(s)	Document	Page Numbers(s)	Document
108	2023 PMO <i>Section(s): 16p. (D) 2.c</i> <i>Appendix:</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

c. The individual has demonstrated the ability to satisfactorily conduct all pasteurization control tests, in the presence of a regulatory official, within the past-year 24 months;

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	117
Committee:	Tech Eng
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

Proposal #119 as passed by the Conference delegates during the 2023 NCIMS failed to update Table #4 in Section 7 of the PMO as well as NCIMS FORM 2359b for this new test procedure utilized when testing Higher-Heat-Shorter-Time (HHST) systems employing a magnetic flow meter-based timing systems (MFMBTS).

This proposal seeks program alignment by adding the new HHST test 11.6 to Table #4 of the PMO as well as to NCIMS FORM 2359b, Milk Plant Equipment Test Report.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

Table #4 (Section 7) in the PMO lists the required tests for milk pasteurization systems identified in Appendix I. The latest HHST test (11.6) that was added in 2023 must be included in this table for it to be complete and accurate.

In addition, NCIMS FORM 2359b (Milk Plant Equipment Test Report) must also reflect the current tests for milk pasteurization system. This form is routinely used by state regulatory agencies and authorized milk plant employees that have been trained and qualified to conduct the temporary sealing of public health controls to verify the safe operation of milk pasteurization systems.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
Page 111	2023 PMO <i>Section(s): 7</i> <i>Appendix:</i>		2023 EML
	2023 MMSR	X	Forms <i>Form Number: 2359b</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:
Section 7, Item 16p,

Table 4. Equipment Tests - Batch Pasteurizers and HTST and HHST Pasteurization Systems

1.	Vat, HTST and HHST indicating and airspace thermometers	Temperature accuracy
2.	Vat, HTST and HHST recording thermometer	Temperature accuracy
3.	Vat, HTST and HHST recording thermometer	Time accuracy
4.	Vat, HTST and HHST indicating and recording thermometer	Recording vs. Indicating thermometer
5.1	HTST and HHST FDD	Leakage pass FDD
5.2	HTST and HHST FDD	FDD freedom of movement
5.3	HTST and HHST FDD	Device assembly (single stem)
5.4	HTST and HHST FDD	Device assembly (dual stem)
5.5	HTST FDD	Manual diversion
5.6	HTST and HHST FDD	Response time
5.7	HTST and HHST FDD	Time delay (inspect)
5.8	HTST and HHST FDD	Time delay (CIP)
5.9	HTST FDD	Time delay (leak-detect flush)
6.	Vat leak-protector valve(s)	Leakage
7.	HTST indicating thermometers	Response time
8.	HTST recording thermometers	Response time
9.1	HTST pressure switches	Regenerator pressures
9.2.1	HTST and HHST differential pressure controllers	Calibration
9.2.2	HTST differential pressure controllers	Regenerator pressure
9.2.3	HTST* and HHST differential pressure controllers	Regenerator pressure
9.3.1	HTST booster pump/FDD	Inter-wiring check
9.3.2	HTST booster pump/timing pump	Inter-wiring check
10.1	HTST FDD	Temperature cut-in/cut-out

10.2	HTST* and HHST FDD divert system (indirect heat)	Temperature cut-in/cut-out
10.3	HTST* and HHST FDD divert system (direct heat)	Temperature cut-in/cut-out
11.1	HTST holding tubes/timing pumps (except magnetic flow meter based timing systems (MFMBTS))	Holding time
11.2.a	HTST holding tubes/ MFMBTS	Holding time
11.2.b	HTST and HHST MFMBTS	Flow alarm
11.2.c	HTST and HHST MFMBTS	Loss of signal/low flow
11.2.d	HTST MFMBTS	Flow rate cut-in/cut-out
11.2.e	HTST MFMBTS	Time delay
11.2.f	All MFMBTS	High flow alarm response time
11.3	HHST holding tubes indirect heat	Holding time
11.4	HHST holding tubes direct injection heat	Holding time
11.5	HHST holding tubes direct infusion heat	Holding time
11.6	<u>HHST holding tubes direct infusion heat with MFMBTS</u>	<u>Holding time</u>
12.1	HTST* and HHST indirect heating	Sequence logic
12.2	HTST* and HHST direct heating	Sequence logic
13.	HHST	Pressure in the holding tube
14.	HTST* and HHST using direct injection heating	Pressure differential across injector
15.	HTST and HHST (all electronic controls)	Electro-Magnetic Interference

* For HTST systems with the FDD located downstream of the regenerator and/or cooler section.

NCIMS FORM 2359b

National Conference on Interstate Milk Shipments		MILK PLANT EQUIPMENT TEST REPORT		
TEST NO.	TEST	TEST FREQUENCY	TESTED (X or NA)	RESULTS OF TEST <i>(See Reverse for Working Notes)</i>
1.	Indicating Thermometers (including air space): Temperature Accuracy	3 months	NA	
2.	Recording Thermometers: Temperature Accuracy	3 months	NA	
3.	Recording Thermometers: Time Accuracy	3 months	NA	
4.	Recording Thermometers: Checked against Indicating Thermometer	3 months	NA	
5.	Flow-Diversion Device (FDD): Proper Assembly and Function (HTST and HHST)			
5.1	Leakage Past Valve Seat(s)	3 months	NA	
5.2	Operation of Valve Stem(s)	3 months	NA	
5.3	Device Assembly (micro-switch) Single Stem	3 months	NA	
5.4	Device Assembly (micro-switches) Dual Stem	3 months	NA	
5.5	Manual Diversion - Parts (A, B, and C) (HTST only)	3 months	NA	
5.6	Response Time	3 months	NA	
5.7	Time Delay Interlock (dual stem devices) (Inspect)	3 months	NA	
5.8	Time Delay Interlock (dual stem devices) (CIP)	3 months	NA	
5.9	Leak Detect Flush Time Delay (HTST only as applicable)	3 months	NA	
6.	Leak-Protect Valves: Leakage (Vats only)	3 months	NA	
7.	Indicating Thermometers on Pipelines: Thermometric Response (HTST only)	3 months	NA	

8.	Recorder-Controller: Thermometric Response (HTST only)	3 months	NA	
9.	Regenerator Pressure Controls			
9.1	Pressure Switches (HTST only)	3 months	NA	
9.2	Differential Pressure Controllers			
9.2.1	Calibration	3 months	NA	
9.2.2	Interwiring Booster Pump (HTST only)	3 months	NA	
9.2.3	Interwiring FDD (HTST* and HHST)	3 months	NA	
9.3	Additional Booster Pump Interwiring (HTST only)			
9.3.1	With FDD	3 months	NA	
9.3.2	With Timing Pump	3 months	NA	
10.	Milk-Flow Controls: Cut-in and Cut-out Temperatures (10.1, 10.2*, or 10.3*)	3 months	NA	
11.	Timing System Controls			
11.1	Holding Time (HTST, except MFBTS)	6 months	NA	
11.2.a	Magnetic Flow Meters (HTST only)	6 months	NA	
11.2.b	Flow Alarm (HTST and HHST)	6 months	NA	
11.2.c	Loss of Signal Alarm (HTST and HHST)	6 months	NA	
11.2.d	Flow Cut-in/Cut-out (HTST only)	6 months	NA	
11.2.e	Time Delay (after divert) (HTST with a FDD located at the end of the holding tube)	6 months	NA	
11.2.f	High Flow Alarm Response Time (All MFBTS)	6 months	NA	
11.3	HHST Indirect Heating	6 months	NA	
11.4	HHST Direct Injection Heating	6 months	NA	
11.5	HHST Direct Infusion Heating	6 months	NA	
11.6	HHST Direct Infusion Heating with a MFBTS	6 months	NA	
12.	Controller: Sequence Logic (HHST) (12.1* or 12.2*)	3 months	NA	
13.	Product Pressure-Control Switch Setting (HHST)	3 months	NA	
14.	Injector Differential Pressure Injection Heating (HTST* and HHST)	3 months	NA	
15.	Electro-Magnetic Interference from Hand-Held Communication Devices (HTST and HHST)	3 months	NA	
*For HTST systems with the FDD located downstream of the regenerator and/or cooler section.				
REMARKS (If additional space is required please place information on the back of this Form or on a separate page.)				
PLANT	IDENTITY OF EQUIPMENT	LOCATION	DATE	SANITARIAN
NOTE: This Form is a supplement to the Milk Plant Inspection Report, FORM NCIMS 2359, and these tests are in addition to the equipment requirements for which compliance is determined by inspection. (Refer to Appendix I of the <i>Grade "A" Pasteurized Milk Ordinance</i> .)				

FORM NCIMS 2359b (10/23)

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	118
Committee:	Tech Eng
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

To explicitly allow use of separators and liquid ingredient injection within all continuous pasteurization systems.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

The current wording of the PMO only mentions “HTST” for the use of separators and liquid ingredient injection within systems. This implies that an “HHST” system (with the FDD after the regenerator and/or cooler or operating at HHST temperatures) that included a separator or liquid ingredient injection would not be allowed because of the specific requirements of the PMO. There may be “general agreement” that the PMO does not prohibit the use of a separator or liquid ingredient injection in an “HHST” system. However, there have been cases where the separators located within an “HHST” system were rejected due to the implication that it was not allowed. For clarity, it would be better to explicitly allow it.

There is no public health reason that limits the use of a separator or liquid ingredient injection based on the pasteurization temperature or time or the location of the FDD as long as all other requirements are met. This proposal does not change any requirements (e.g., temperature, pressure or differential pressure) which address public health concerns.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
112, 114 229-231	2023 PMO <i>Section(s): 7</i> <i>Appendix: H</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

Modify the 2023 PMO, page 112, Section 7, Item 17(p)

ITEM 17p. COOLING OF MILK AND/OR MILK PRODUCTS

For a milk or milk product flavoring slurry that contains milk and/or milk products and is not intended to be injected within a ~~HTST~~ continuous pasteurization system as a part of a liquid ingredient injection system as outlined in Appendix H. of this *Ordinance*, the tanks and/or vessels used to blend and hold the slurry shall be completely emptied and cleaned after each four (4) hours of operation or less, unless the slurry is stored at a temperature of 7°C (45°F) or less, or at a temperature of 66°C (150°F) or greater and maintained thereat.

Modify the 2023 PMO, page 114, Section 7, Item 17(p)

ADMINISTRATIVE PROCEDURES

This Item is deemed to be satisfied when:

...

3. For a milk or milk product flavoring slurry that contains milk and/or milk products and is not to be injected within a ~~HTST~~ continuous pasteurization system as a part of a liquid ingredient injection system as outlined in Appendix H. of this *Ordinance*, the tanks and/or vessels used to blend and hold the slurry shall be completely emptied and cleaned after each four (4) hours of operation or less, unless the slurry is stored at a temperature of 7°C (45°F) or less, or at a temperature of 66°C (150°F) or greater and maintained thereat.

Modify the 2023 PMO, page 229-231, Appendix H

THE USE OF SEPARATORS WITHIN ~~HTST~~ CONTINUOUS PASTEURIZATION SYSTEMS

Separators in ~~HTST~~ continuous pasteurization systems shall be installed and operated in such a manner that they will not adversely affect the regenerator pressures, create a negative pressure

on the FDD during operation or cause milk and/or milk product flow through the holding tube during times when such flow would compromise a required public health safe guard.

...

5. The following criteria applies to installations where a separator is located on the raw side of a HTST continuous pasteurization system and a cream or skim balance tank(s) is not being utilized for the collection of either the cream or skim that exits the HTST pasteurization system:

- a. A fail-safe (spring-to-close upon loss of air or power), block-and-bleed valve or valve arrangement shall be installed on the cream or skim line downstream from the separator and prior to any pump(s) or cream or skim storage tank(s), and shall be at least 30.5 centimeters (12 inches) below the required opening to the atmosphere on the pasteurized side of the HTST regenerator. This fail-safe valve or valve arrangement shall be closed whenever the separator is required to be automatically valved-out of the system and the separator stuffer pump is de-energized.
- b. If a computer or programmable controller is used to provide any of these required functions, it shall comply with the applicable Section(s) of Appendix H., VI. of this *Ordinance*.
- c. If not installed in compliance with a. and b. above, the height of the cream or skim storage tank shall be considered when determining the highest raw product in the HTST pasteurization system.

THE USE OF LIQUID INGREDIENT INJECTION WITHIN HTST CONTINUOUS PASTEURIZATION SYSTEMS

Milk and/or milk product flavoring slurries, condensed milk and/or milk products, and cream or skim for standardization and similar ingredients may be injected at a point after the last regenerator and before the timing pump, if all of the following conditions are met:

...

2. The slurry injection valve(s) is (are) of the fail-safe type, spring-to-close and air-to-open, and are “block-and-bleed” design with a full port open to the atmosphere or a single-bodied double seat mixproof valve design between the HTST pasteurization system isolation seat and the slurry pump when slurry is not being injected.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	119
Committee:	MMSR
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

The purpose of this proposal to eliminate redundant text that is out of context within Section 13, Item #3 of the PMO.

B. Reason for the Submission and Public Health Significance and/or Rationale Supporting the Submission

Section 13 of the PMO explains the reporting of certain communicable human health issues or conditions by milk plant employees to management when there’s a likelihood of spreading a disease through foods.

The Administrative Procedures for this section (Section 13) clearly states; “Milk plant employees, or applicants to whom a conditional offer of employment has been made, shall be instructed by the milk plant that the employee or applicant or applicants to whom a conditional offer of employment has been made is responsible to report to the milk plant management, in a manner that allows the milk plant to prevent the likelihood of the transmission of diseases that are transmissible through foods, if the employee or applicant to whom a conditional offer of employment has been made:”

Most of this same text is repeated further down within the Section under Item #3 and the identified text below should be removed.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
Page 132	2023 PMO Section(s): 13 Appendix:		2023 EML
	2023 MMSR		Forms Form Number:
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

2023 PMO, Section 13, Page 132:

ADMINISTRATIVE PROCEDURES

Milk plant operators who have received reports, under this Section,

Milk plant employees, or applicants to whom a conditional offer of employment has been made, shall be instructed by the milk plant that the employee or applicant or applicants to whom a conditional offer of employment has been made is responsible to report to the milk plant management, in a manner that allows the milk plant to prevent the likelihood of the transmission of diseases that are transmissible through foods, if the employee or applicant to whom a conditional offer of employment has been made:

1. Is diagnosed with an illness due to Hepatitis A virus,...

(Pg. 132)

2. Is exposed to, or suspected of causing, a confirmed foodborne disease outbreak of one (1) of the diseases specified in Item 1 above, including an outbreak at an event such as a family meal, church supper or ethnic festival because the employee or applicant to whom a conditional offer of employment has been made:

- a. Prepared food implicated in the outbreak; or
- b. Consumed food implicated in the outbreak; or
- c. Consumed food at the event prepared by a person who is infected or ill.

3. Lives in the same household as a person who attends or works in a day care center or school, similar institution experiencing a confirmed outbreak of one (1) of the diseases specified in Item 1 above.

~~Similarly, milk plant employees shall be instructed by the milk plant management to report to the milk plant management if the employee, or applicant to whom a conditional offer of employment has been made.~~

- 4. Has a symptom associated with acute gastrointestinal illness such as: Abdominal cramps or discomfort, diarrhea, fever, loss of appetite for three (3) or more days, vomiting, jaundice; or
- 5. Has a pustular lesion such as a boil or infected wound that is:

- a. On the hands, wrists or exposed portions of the arms, unless the lesion is covered by a durable, moisture proof, tight-fitting barrier; or
- b. On other parts of the body if the lesion is open or draining, unless the lesion is covered by a durable, moisture proof, tight-fitting barrier.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	120	
Committee:		
New Procedure		
Procedure Change		
Const./Bylaws Change		

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

This proposal requests consistent language for the requirements of Animal Treatment Records

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

The PMO recommendations for Animal Treatment Records differ from the FDA Residue Avoidance guidance. Producers should be given consistent guidance on the recommended information to be included in Animal Treatment Records.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
166	2023 PMO <i>Section(s):</i> <i>Appendix: C</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

2023 PMO page 166

2. Treatment Records include the following information:

- a. Identity of the animal(s) treated;
- b. Diagnosis/Condition
- c. Date(s) of treatment;
- d. Drug(s) or other chemicals administered;
- e. Dosage administered;
- f. Route of administration
- g. Milk discard time; and f. ~~W~~withdrawal time prior to slaughter, even if zero.
- h. Date the withdrawal period ends
- i. Initials of the person who administered the drug

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	121
Committee:	Scientific
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

Remove language from Appendix D. Standards for Water Sources 111. Construction to allow for surface water as a primary choice water source.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

Firms intending to use surface water as their primary water source should be entitled to do so without demonstrating the unavailability or inadequacy of alternative sources, provided they establish that their disinfection methods ensure the water's safety.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
176-177	2023 PMO <i>Section(s):</i> <i>Appendix: D</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

PMO, Appendix D, (Page 176, 177)

SURFACE WATER

The selection and use of surface water sources, for individual water supply systems, require consideration of additional factors not usually associated with ground water sources. When small streams, open ponds, lakes or open reservoirs must be used as sources of a water supply, the danger of contamination and the consequent spread of enteric diseases, such as typhoid fever and dysentery are increased. ~~As a rule, surface water shall be used only when ground water sources are not available or are inadequate.~~ Clear water is not always safe, and the old saying that running water “purifies itself”, to drinking water quality, within a stated distance is false. The physical and bacteriological contamination of surface water makes it necessary to regard such sources of supply as unsafe for domestic use, unless reliable treatment, including filtration and disinfection, is provided.

The treatment of surface water to ensure a constant, safe supply requires diligent attention to operation and maintenance by the owner of the system.

~~When ground water sources are limited, consideration shall be given to their development for domestic purposes only.~~ Surface water sources can then provide water needed for stock and poultry watering, gardening, fire-fighting and similar purposes. Treatment of surface water, used for livestock, is not generally considered essential. There is however, a trend to provide stock and poultry drinking water that is free from bacterial contamination and certain chemical elements.

~~Where the final resort must be made to~~ When utilizing surface water for all uses, a wide variety of sources, including farm ponds, lakes, streams and the roof runoff of buildings may be considered. These sources are regarded, without exception, to be contaminated, and their use cannot be condoned unless an individually tailored treatment process can be used, which

will make them safe and satisfactory. Such treatment may include aeration and the use of suitable filtration or precipitation devices to remove suspended matter, in addition to routine

full-time disinfection. The milk producer and/or milk plant operator, who is considering surface sources of water for milking, milkhouse and milk plant, receiving station and/or transfer station operations shall receive the advance approval of the Regulatory Agency and shall comply with all applicable requirements of the applicable Government Water Control Authority on the construction, protection and treatment of the chosen supply.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	122
Committee:	Tech Eng
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

This proposal explicitly identifies that, in a direct heating continuous pasteurization system with a MFMBTS, the flow meter may be located before the steam injector or infusion chamber. It also clarifies that the outlet pump of an infusion vessel does not have to be a centrifugal pump.

This proposal is based on discussions and recommendations of the NCIMS Proposal 102 Committee.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

Per the current wording of the PMO, flow promoting devices may not be installed between the MFMBTS flow meter and the holding tube except that a centrifugal pump may be installed at the exit of an infusion chamber.

There is not a food safety issue that requires the pump at the exit of the infusion chamber to be a centrifugal pump. Other types of pumps have been used in this application. This proposal clarifies that the PMO does not require a centrifugal pump.

This clause could also be interpreted to mean that the timing flow meter must be after the steam injector or infusion chamber. Most direct heating pasteurization systems have the timing flow meter located before the direct heating element (injector or infusion chamber.) This has been accepted for at least 40 years, even though it is not explicitly allowed by the PMO. This proposal clarifies that it is acceptable to locate the MFMBTS flow meter before the direct heating element.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
234	2023 PMO <i>Section(s):</i> <i>Appendix: H</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

PMO Appendix H (page 234) – Placement of Components 2

Placement of Components: Individual components in a MFMBTS shall comply with the following placement conditions:

1. The magnetic flow meter shall be placed after the last raw product regenerator outlet and upstream of the holding tube. There shall be no intervening flow-promoting components between the magnetic flow meter and the holding tube, except that a centrifugal pump may be used at the outlet of a steam infusion chamber to maintain pressure in the holding tube as necessary to ensure single-phase flow. For direct steam heating systems, the steam injector or the infusion chamber and the pump at the outlet of infusion chamber may be located between the flow meter and the holding tube when the requirements of 16(p) 2.g. and h. are met.
2. For HTST pasteurization systems, when a sanitary check valve or normally closed automatically controlled sanitary valve, as described in #7 above, is used with a variable or constant speed flow promoting device, it shall be located downstream of the last regenerator outlet and upstream of the holding tube.

NOTE: This provision is not applicable to HHST pasteurization systems.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	123
Committee:	Tech Eng
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

Update the testing requirements in Appendix I, Test 8, Methods and Procedures to match that found in Test 7.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

The current requirements listed in Test 8, on pg 299, require the thermometric response test to be conducted on each cut-in set point. Whereas, with Test 7, the Method section allows for multiple cut-in set points to be tested if they fall within the same 7°C (12°F) range.

While the need to test each cut-in may have been (and still be) relevant on older STLRs that require a pen to drag across the paper, the difference in response for the digital and/or electronic chart recorders is negligible. At the very least, the requirements should be defined based on the type of STLR utilized in the pasteurization system.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
299	2023 PMO <i>Section(s):</i> <i>Appendix: I</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

PMO, pg 299, Test 8

Method: Measure the time interval between the instant when the temperature recorder-controller thermometer reads 7°C (12°F) below the cut-in temperature and the moment of cut-in by the temperature recorder-controller. This time interval measurement is made when the temperature recorder-controller sensing element is immersed in a rapidly agitated media bath maintained at 4°C (7°F) above the cut-in temperature. For digital and/or electronic temperature recorder-controllers, if there are multiple cut-in temperatures and one (1) or more are separated by more than 7°C (12°F), this Test shall also be conducted for any cut-in temperature(s) not included within the initial 7°C (12°F) range as addressed in **Procedure 1** below.

Procedure:

1. Check and, if necessary, adjust the pen-arm setting of the temperature recorder-controller thermometer to read the same as the indicating thermometer at pasteurization temperature.
2. Allow the temperature recorder-controller sensing element to cool to room temperature.
3. Heat the media bath to 4°C (7°F) above the cut-in temperature, while continuously agitating the media bath to ensure a uniform temperature.
4. Immerse the temperature recorder-controller sensing element in the media bath. Continue agitation during **Procedures 5** and **6** below.
5. Start the accurate time measuring device when the temperature recorder-controller thermometer reaches a temperature of 7°C (12°F) below the cut-in temperature.
6. Stop the accurate time measuring device when the temperature recorder-controller cuts in.
7. Record the results of the Test on the appropriate Form.
8. Repeat **Procedures 1** through **7** for each temperature cut-in set point, as required.

For Example: For a temperature recorder-controller sensing element used at pasteurization temperature set points of 71.7°C (161°F) and 74.4°C (166°F), a media bath at a temperature of 78.3°C (173°F) could be used. 11°C (19°F) lower than a 78.3°C (173°F) media bath would be 67.8°C (154°F); 4°C (7°F) lower than a 78.3°C (173°F) media bath would be 74.4°C (166°F). Hence, after immersing the temperature recorder-controller sensing element that has been previously cooled in the ice and water media bath, into the 78.3°C (173°F) bath, the accurate

time measuring device is started when the thermometer reads 67.8°C (154°F) and the accurate time measuring device is stopped when it reads 74.3°C (166°F).

NOTE: **The Example** included the pasteurization temperature set points of 71.7°C (161°F) and 74.4°C (166°F). If the pasteurization temperature set points had been 71.7°C (161°F) and 79.4°C (175°F), it would not have been possible to include both set points within a 7°C (12°F) span. With these set points of 71.7°C (161°F) and 79.4°C (175°F) the Test would have to be conducted separately for each set point.

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39th NATIONAL CONFERENCE ON INTERSTATE MILK SHIPMENTS

Proposal #:	124
Committee:	Tech Eng
New Procedure	<input type="checkbox"/>
Procedure Change	<input type="checkbox"/>
Const./Bylaws Change	<input type="checkbox"/>

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

This proposal is submitted to provide consistency within Appendix I of the PMO for frequency of holding time testing requirements for Appendix I, Test 11.5.

This proposal is based on discussions and recommendations of the NCIMS Proposal 102 Committee.

B. Reason for the Submission and Public Health Significance and/or Rationale Supporting the Submission

The required testing frequency currently listed in Test 11.5 is once every three (3) months, however the required holding time test frequency for all other holding time tests in Appendix I is once every six (6) months. The inconsistency in Test 11.5 has been overlooked for some time.

There is no change of public health significance.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
325	2023 PMO <i>Section(s):</i> <i>Appendix: I</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

11.5 HHST PASTEURIZATION SYSTEMS HOLDING TIME USING DIRECT STEAM INFUSION HEATING WITH A STEAM PRESSURE RELIEF POP-OFF VALVE AND A VACUUM CHAMBER ORIFICE IN PLACE OF A TIMING PUMP

Application: To all HHST pasteurization systems using direct steam infusion heating and using a steam pressure relief pop-off valve and a vacuum chamber orifice in place of a timing pump.
 Frequency: Upon installation; at least once each ~~three (3) months~~ six (6) months thereafter; whenever the steam infusion shell or feed line, pressure relief pop-off valve or vacuum chamber orifice has been repaired or replaced; or whenever the regulatory seal has been broken.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	125
Committee:	Single Service
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

To clarify which facilities must comply with the requirements of Appendix J by incorporating guidance from several M-I:

M-I-06-15 question #65

M-I-03-17 question #46

M-I-05-04 question #37

M-I-13-6 question #78

This proposal would specifically clarify the exemption of metal aerosol cans.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

The M-Is have allowed an exemption for metal aerosol and fittings from needing to be IMS listed. This proposal adds that exemption into the PMO while maintaining the requirement that this exemption only applies when components are properly sanitized prior to their use. The proposal also takes guidance from the M-Is to clarify that those facilities applying labels (shrink wrap or adhesive) to or repackaging single service materials will need to be IMS listed and comply with the requirements of Appendix J. The thought process being that during the process of handling the single-service containers and applying the labels or repackaging items, the product contact surfaces of the single-service containers may be exposed to contamination from the facility's environment, equipment and/or personnel.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
336	2023 PMO <i>Section(s):</i> <i>Appendix: J</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change: PMO Appendix J (page 336)

STANDARDS FOR THE FABRICATION OF SINGLE-SERVICE CONTAINERS AND/OR CLOSURES FOR MILK AND/OR MILK PRODUCTS

a. PURPOSE AND SCOPE

The use of these Standards will ensure the production of sanitary containers and closures for milk and milk products, as defined in this *Ordinance*.

These Standards shall apply to all blank fabricators, pre-form bottle manufacturers, single-service glass container manufacturers, converters, printers, those applying labels, closure manufacturers, plastic laminators, sheet formers, blow molders, vacuum formers, plastic extruders, injection molders, pre-formers, manufacturers of valves, tubes, dispensing devices, non-sterile sample containers and any other similar plants including those who repackage single service containers and/or closures. These also apply to fabricating plants producing a component part(s), including fabricators of film and/or closures, which may become a product-contact surface and plants assembling components into a final assembled product. These requirements shall not apply to paper mills, ~~or resin manufacturing plants-~~, or manufacturers of spray nozzles and other component parts, i.e., the metal collar, spring, check ball, etc., as long as the parts: are made from safe materials, are submerged in a sanitizing solution, and drained just prior to being fitted onto the metal aerosol can.

Milk and food plants manufacturing and/or selling containers to other milk plants, as defined in this *Ordinance*, excluding milk plants that condense and/or dry milk or milk products, shall meet all the requirements of these Standards.

Grade “A” milk plants, as defined in this *Ordinance*, excluding milk plants that condense and/or dry milk or milk products, shall use single-service containers and closures from plants certified and listed in the electronic publication of the *IMS List*.

These Standards provide certain criteria for the listing of certified single-service manufacturers in the current publication of the *IMS List*. (Refer to Section I. of the *MMSR*.)

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	126
Committee:	Scient./ SSCC
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

To add language that allows the use of Food Contact Substances (FCS) Notifications (FCN) from the FDA as an acceptable alternative to having citations from 21 CFR 174-178 for resins, inks, and other single-service materials.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

While Proposal 214 from the 2011 NCIMS Conference incorporated the FCN process into Appendix J's Section D, Item 20, it didn't address this process into Items 16 and 17. The current wording in these items only references 21 CFR 174-178 compliance, potentially excluding resins approved through the FCN process. This proposal aims to explicitly state that FCN approval is an acceptable alternative to 21 CFR 174-178 compliance, thus eliminating any confusion about acceptable compliance methods.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
344, 345	2023 PMO <i>Section(s):</i> <i>Appendix: J</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change: PMO Appendix J (page 344 and 345)

16. MATERIALS FOR THE CONSTRUCTION OF CONTAINERS AND/OR

CLOSURES a. Only resin in compliance with 21 CFR Parts 174-178 or have certification letters (Food Contact Surfaces (FCS) Notification (FCN)) stating the product complies with FDA shall be used for the construction of containers and/or closures. Only plastic sheeting and extrusions, plastic laminated paper, roll stock, component part(s), molded or formed parts, metal and paperboard blanks, or combinations thereof, from a manufacturing and/or fabricating plant conforming to these Standards, shall be used. Fabricating plants listed in the current *IMS List* shall be considered in compliance with this Item.

b. Only food-grade, non-toxic lubricants shall be used on container and/or closure-contact surfaces. Excess lubricant shall be removed from surfaces close to shafts, rollers, bearing sleeves and mandrels. These lubricants shall be handled and stored in a manner that shall prevent cross contamination with non-food-grade lubricants. Such storage areas shall be clean and adequately ventilated.

c. Containers, closures, resin and flashing on the floor, floor sweepings of production materials and production scrap are prohibited from being reused. This shall not preclude the use of these materials when they comply with a recycling protocol that has been reviewed and accepted by FDA.

17. WAXES, ADHESIVES, SEALANTS, COATINGS AND INKS a. Waxes, adhesives, sealants, coatings and inks used for containers and/or closures shall be handled and stored in a manner that shall prevent cross contamination with similar non-food- grade materials. Such storage areas shall be clean and adequately ventilated.

b. Unused materials shall be covered, labeled and properly stored.

c. Waxes, adhesives, sealants, coatings and inks shall not impart odor or taste to the milk or milk products and shall not contaminate the product with microorganisms or toxic or injurious substances. All materials that are applied to the product-contact surface shall comply with the requirements of 21 CFR Parts 174-178 or have certification letters (Food Contact Surfaces (FCS) Notification (FCN)) stating the product complies with FDA.

d. Transfer containers shall be kept clean and shall be properly identified and covered.

e. Waxing shall be performed so as to assure that containers and/or closures

- 20. IDENTIFICATION AND RECORDS**
- a. Outer wrappings shall be identified with the name, city and State of the plant where the contents are fabricated, except those manufactured in, and which are only for use in the same facility. For foreign manufacturing plants, the outer wrap shall also be identified with the country. Where several plants are operated by one (1) firm, the common firm name may be utilized, provided that the location of the plant at which the contents were fabricated is also shown either directly or by the Federal Information Processing Standards (FIPS) numerical code on the outer wrapper.
 - b. Single-service glass containers shall be labeled with wording to designate “single-service use only”.
 - c. Records of all required bacteriological tests of containers and/or closures shall be maintained at the plant of manufacture for two (2) years and results shall be in compliance with Section C. of these Standards.
 - d. It is the responsibility of the inspected/certified and listed plant to maintain records verifying the bacterial and chemical safety of all component parts utilized in the final assembled product.
 - e. The fabricating plant shall have on file information from suppliers of raw materials, waxes, adhesives, sealants, coatings and inks indicating that the material complies with the requirements of 21 CFR Parts 174-178 or have certification letters (Food Contact Surfaces (FCS) Notification (FCN)) stating the product complies with FDA. The FCN shall include the FCS, the notifier, the manufacturer of the FCS, the intended use, the limitations on the conditions of use for the FCS and its specifications, the effective date, and its environmental decision.
 - f. The fabricating plant shall have on file information from the suppliers of packaging materials specified in these Standards indicating that the material complies with the requirements of 21 CFR Parts 174-178 and the bacteriological standards of Section C. of these Standards.
 - g. Multi-plant corporations may have all the required information at a central location as long as it can be transmitted to the site upon request.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	127
Committee:	Scient. / SSCC
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

This proposal permits the use of inks, resins, waxes, adhesives, sealants, and coatings that do not have compliance with 21 CFR 174-178 if a valid migration study shows the lack of transfer of the component in question to the product contact surface of the single service container/closure.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

Currently, Sanitation Rating Officers (SROs) rely on the guidance found in M-I-16-13 (Question #42) to allow for the use of inks, resins, waxes, adhesives, sealants, and coatings that do not conform to the standards of 21 CFR 174-178 if there is a valid migration study conducted to ensure that the component in question does not migrate to the product contact surface of the container through itself or when nested in another container/closure. This proposal seeks to formally incorporate this existing practice directly into the Pasteurized Milk Ordinance (PMO).

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
344, 345	2023 PMO <i>Section(s):</i> <i>Appendix: J</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change: PMO Appendix J (page 344 and 345)

17. WAXES, ADHESIVES, SEALANTS, COATINGS AND INKS a. Waxes, adhesives, sealants, coatings and inks used for containers and/or closures shall be handled and stored in a manner that shall prevent cross contamination with similar non-food- grade materials. Such storage areas shall be clean and adequately ventilated.

b. Unused materials shall be covered, labeled and properly stored.

c. Waxes, adhesives, sealants, coatings and inks shall not impart odor or taste to the milk or milk products and shall not contaminate the product with microorganisms or toxic or injurious substances. All materials that are applied to the product-contact surface shall comply with the requirements of 21 CFR Parts 174-178: or have documentation of a valid migration test showing a lack of transfer of any part of the component either through the package (bleed through from the outside to the inside through the container wall) or from the outside of one (1) container to the inside of another (such as in the case of “nested” containers or roll stock).

d. Transfer containers shall be kept clean and shall be properly identified and covered.

e. Waxing shall be performed so as to assure that containers and/or closures.

20. IDENTIFICATION AND RECORDS a. Outer wrappings shall be identified with the name, city and State of the plant where the contents are fabricated, except those manufactured in, and which are only for use in the same facility. For foreign manufacturing plants, the outer wrap shall also be identified with the country. Where several plants are operated by one (1) firm, the common firm name may be utilized, provided that the location of the plant at which the contents were fabricated is also shown either directly or by the Federal Information Processing Standards (FIPS) numerical code on the outer wrapper.

b. Single-service glass containers shall be labeled with wording to designate “single-service use only”.

c. Records of all required bacteriological tests of containers and/or closures shall be maintained at the plant of manufacture for two (2) years and results shall be in compliance with Section C. of these Standards.

d. It is the responsibility of the inspected/certified and listed plant to maintain records verifying the bacterial and chemical safety of all component parts utilized in the final assembled product.

e. The fabricating plant shall have on file information from suppliers of raw materials, waxes, adhesives, sealants, coatings and inks indicating that the material complies with the requirements of 21 CFR Parts 174-178: or have documentation of a valid migration test showing a lack of transfer of any part of the component either through the package (bleed through from the outside to the inside through the container wall) or from the outside of one (1) container to the inside of another (such as in the case of “nested” containers or roll stock).

f. The fabricating plant shall have on file information from the suppliers of packaging materials specified in these Standards indicating that the material complies with the requirements of 21 CFR Parts 174-178 and the bacteriological standards of Section C. of these Standards.

g. Multi-plant corporations may have all the required information at a central location as long as it can be transmitted to the site upon request.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	128
Committee:	Lab / SSCC
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

To incorporate the information of M-I-06-15 question #70 into the PMO that clarifies the requirement that overwrap used on single service material which is required to be tested does not need to occur at an Official, Commercial or Industry Laboratory approved by the Milk Laboratory Control Agency.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

With the sunset of the M-Is, the requirements for overwrap of single service material will follow the requirements set forth in section C of Appendix J for single service material that the testing must be done in an Official, Commercial or Industry Laboratory approved by the Milk Laboratory Control Agency and the exemption will be lost.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
345	2023 PMO <i>Section(s):</i> <i>Appendix: J</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:

PMO, Appendix J (page 345)

19. WRAPPING AND SHIPPING

- a. Blanks, closures, halves, nested or pre-formed containers and parts such as valves, hoses, tubes and other fittings shall be properly packaged or containerized prior to shipping.
- b. The outer package or containerized units shall protect the contents from dust and other contamination.
- c. Transportation vehicles used to ship finished materials from the single-service container and/or closure plant or within the plant shall be clean and in good repair and shall not have been used for the transportation of garbage, waste or toxic materials.
- d. Paperboard containers, wrappers, and dividers that contact the surface of the container and/or closure shall not be reused for this purpose.
- e. All packaging materials that contact the product-contact surface of the container and/or closure shall comply with the requirements of 21 CFR Parts 174-178 and the bacteriological standards of Section C. of these Standards, but the materials do not have to be manufactured at a listed single-service plant. Some outer packaging material such as corrugated cardboard boxes used for the packaging of milk carton flats, are exempt from this bacteriological standard. The edges of these flats are subject to heat during the forming and sealing of the container. There are not any specifications for the bacteriological sampling frequency nor does the testing need to occur in an Official, Commercial or Industry Laboratory approved by the Milk Laboratory Control Agency. The Regulatory Agency may choose to collect samples of packaging materials to determine compliance with the bacteriological standards of this Section.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	129
Committee:	Single Service
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

To require single service facilities to include their Federal Information Processing Standards (FIPS) numerical code and the facilities assigned manufacturer number as it appears on the Interstate Milk Shipper (IMS) list on the outer wrappers and core tags of IMS single service containers and/or closures. This would replace the current option that allows facilities to use either the facility name, city, and state or the FIPS numerical code alone. This proposal would formally incorporate the guidance from M-I-14-10 #78 into the PMO.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

This proposal addresses a critical traceability issue with single service containers and/or closures used in dairy facilities. Currently, it is difficult to track IMS-certified materials within and across state lines during plant surveys. Single service facilities can produce both IMS-certified and non-certified materials. IMS certification may only apply to specific production lines and/or materials and not to the entire facility. Without proper identification, non-IMS materials may inadvertently be sent to dairy plants or other single service facilities. This proposed solution would require that IMS-certified single service container and/or closures (and only IMS ones) to have the combination of their FIPS number and IMS listed manufacturer number as it appears on the Interstate Milk Shipper (IMS) list to be present on

the outer wrapper and the core tag. The core tag would ensure that once the outer wrapper is removed, traceability of that product can still be achieved. This provides a way for the dairy plant or further processing single service facility to detect if they are shipped non-IMS single service materials. This proposal would also increase the awareness of single service manufacturers as to what their closures and/or containers are being utilized for and if it is by IMS facilities, to ensure proper testing is done if required on those finished products as described in Appendix J.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
345	2023 PMO <i>Section(s):</i> <i>Appendix: J</i>		2023 EML
	2023 MMSR		Forms <i>Form Number:</i>
	2023 Procedures		2023 Constitution and Bylaws

Proposed Change:
PMO, Appendix J (page 345)

20. IDENTIFICATION AND RECORDS

- a. Outer wrappings and the core tag, if applicable shall be identified with the ~~name, city and State of the plant where the contents are fabricated, except those manufactured in, and which are only for use in the same facility.~~ Federal Information Processing Standards (FIPS) numerical code along with the manufacturer number assigned to that facility as it appears on the IMS list. For foreign manufacturing plants, the outer wrap shall also be identified with the country. ~~Where several plants are operated by one (1) firm, the common firm name may be utilized, provided that the location of the plant at which the contents were fabricated is also shown either directly or by the Federal Information Processing Standards (FIPS) numerical code on the outer wrapper.~~
- b. Single-service glass containers shall be labeled with wording to designate “single-service use only”.
- c. Records of all required bacteriological tests of containers and/or closures shall be maintained at the plant of manufacture for two (2) years and results shall be in compliance with Section C. of these Standards.
- d. It is the responsibility of the inspected/certified and listed plant to maintain records verifying the bacterial and chemical safety of all component parts utilized in the final assembled product.

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39th NATIONAL CONFERENCE ON
INTERSTATE MILK SHIPMENTS

Proposal #:	130
Committee:	Single Service
New Procedure	
Procedure Change	
Const./Bylaws Change	

	No Action	Passed as Submitted	Passed as Amended
COUNCIL ACTION			
FINAL ACTION			

A. Summary of Proposal

The author requests the Single Service Container and Closure Committee Chair establish a study group to review Appendix J FDA Memorandums of Information (M-I's) for the purpose of selecting priorities of preservation, methods for accessibility and potential incorporation into the PMO.

**B. Reason for the Submission and
Public Health Significance and/or Rationale Supporting the Submission**

The Food and Drug Administration's practice of publishing interpretive memorandums(M-I's) to serve as an adjunct document for implementing a specific rule, as established in the Pasteurized Milk Ordinance, is being eliminated. M-I's have provided significant benefits to inspectors, rating officers and lab personnel in their duties as assigned. The Single Service Container and Closure Committee would like to review, select, or preserve past M-I's associated with Appendix J of the PMO. The goal is to either incorporate specific M-I's into the PMO via proposal, "sunset" irrelevant M-I's or make selected M-I documents available as an electronic posting to assist all involved with Appendix J Single Service.

C. Proposed Solution

Changes to be made on the following NCIMS Documents:

Page Number(s)	Document	Page Numbers(s)	Document
	2023 PMO Section(s): Appendix:		2023 EML
	2023 MMSR		Forms Form Number:
	2023 Procedures		2023 Constitution and Bylaws

Proposed Solution: The SSCC committee will select actions to be taken on M-I's that will be soon eliminated by the FDA. The actions will include; allowing the "sunsetting" of the M-I's formerly created by the FDA, incorporation of selected M-I content into the PMO via proposal, or suggesting a publicly available posting of selected M-I's to preserve past interpretations of PMO rule and policy.

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