HOWARD COUNTY
HEALTH DEPARTMENT

8930 Stanford Blvd | Columbia, MD 21045
410.313.6300 - Voice/Relay
410.313.6303 - Fax
1.866.313.6300 - Toll Free

Maura J. Rossman, M.D., Health Officer

Guidelines for Submitting a Hazard Analysis Critical Control Point (HACCP) Plan

Health-General Article, §21-321, Annotated Code of Maryland, and the Code of Maryland Regulations (COMAR) 10.15.03 Food Service Facilities require that plans and specifications be submitted to the Department when a person proposes to construct, remodel or alter a food establishment, or convert or remodel an existing building for use as a food establishment. Plans and specifications for the building and equipment, and information regarding the foods to be prepared, processed, or manufactured are required. This information will be used to classify the facility as high, moderate, or low priority. Definitions of priority assessment levels are found in COMAR 10.15.03.33C.

A HACCP plan is required for all high or moderate priority facilities and must be updated and approved by the approving authority every 5 years (from the date of last HACCP plan approval), as well as, before a new process is implemented COMAR 10.15.03.34A. *Facilities selling only hand dipped ice cream or commercially packaged potentially hazardous foods directly to consumer and non-potentially hazardous food that is cut, assembled or packaged on the premise such as candy, popcorn and baked goods* ***do not*** *require a HACCP plan.* The following information is intended to assist you in providing the necessary information for both priority assessment and HACCP plan development.

Contents

A. Priority Assessment Information

1. *Menu or foods* – Provide a copy of the menu or a written description of the foods to be prepared and served

2. *Food service system* – Specify the food preparation and service systems you will use, i.e. cook-serve, cook-chill-reheat-hot hold-serve, cold hold-serve.

3. *Population served* – Specify whether you will serve food in a health care facility, as defined in COMAR 10.15.03.02B(38).

B. Food Handling Information and Procedures *(only required for facilities classified as "high" or "moderate" priority per COMAR 10.15.03.33C)*:

Facility to comment on each of the following:

1. Describe how you will ensure all foods are obtained from approved sources per COMAR 10.15.03.02B(3).

2. Specify how you will ensure cross contamination from raw to cooked and/or ready to eat food will be prevented per COMAR 10.15.03.09F.

3. Describe process for ensuring frozen potentially hazardous foods will be thawed in an approved manner per COMAR 10.15.03.09D.

4. Indicate how potentially hazardous foods will be cooled (i.e. ice bath, shallow pans, rapid chill, etc) in accordance with COMAR 10.15.03.11B.

5. List foods or categories of foods that will be prepared 24 hours or more in advance per COMAR 10.15.03.33C(3)(b)(i).

6. List foods that will be received pre-packaged commercially processed that will be reheated for hot holding;

7. Specify whether any prepared foods will be distributed off premises COMAR 10.15.03.06D

8. Specify whether any refrigerated foods are received which require storage temperatures below 41°F as per COMAR 10.15.03.06B(9) and (10).

9. Indicate whether any special processing of foods will be conducted on site (i.e. Reduced Oxygen Package/ROP, Sous Vide, Smoking, Curing, Fermenting, Dehydration, Sushi, etc.).

10. Include specific information for any processes or procedures which incorporate:

    - "Time-only" control (see COMAR 10.15.03.08)
    - "Pooling" of eggs (see COMAR 10.15.03.09C)
    - Serving raw or undercooked animal foods (see COMAR 10.15.03.10 C, D & F).

C. **HACCP Plan Required Contents** COMAR 10.15.03.33E

The plan must include:

1. Identification of Critical Control Points (CCP): CCPs generally include cooking, cooling, reheating, cold holding **(when not followed by a kill step),** and hot-holding, but other steps may be included, if needed for a specific food. Note that cold food preparation, like chopping, mixing and slicing, ***are not*** CCP steps. Hazards are controlled during those processes by following Good Retail Practices (GRPs); sometimes referred to as Standard Operating Practices (SOPs);

2. Critical limits for each CCP;

3. Monitoring procedures for each CCP;

4. The corrective action(s) that will be taken if there is a loss of control at a CCP due to such factors as employee error, equipment malfunction, power failure, or any other factor that causes loss of control at a CCP;

5. Verification procedures, by a person in charge, will ensure proper monitoring of each CCP such as calibration of cooking and holding equipment and thermometers, and maintenance and review of records such as temperature logs. Using logs for record keeping is strongly encouraged but not required, as long as the facility can demonstrate that temperatures are routinely monitored, as described in the HACCP plan, and that specified corrective actions are taken when critical limits are not met;

6. A list of equipment used to support the proposed food service systems and maintain control at each CCP; and

7. Written procedures for employee training on HACCP procedures (see attached example in section "F").

D. HACCP Plan Formatting Instructions

The HACCP plan for your facility should be developed in a format which is easy for your employees to use (charts, diagrams, examples provided or another acceptable format that incorporates all the requirements). Once approved, this document must be readily available in the food preparation area of each facility. Examples of acceptable methods include:

1. Listing each CCP separately, with the menu item(s)s that utilize the CCP, the critical limit(s), monitoring procedure(s), corrective action, verification method(s) for that CCP, and the equipment used to control the CCP (see attached example #1);

2. Using a HACCP flow diagram and chart method for selected menu items or groups of menu items (see attached example #2);

3. Incorporating each CCP and the monitoring, corrective action(s), and equipment used directly into the recipe or preparation instructions (see attached example #3); or

4. Using the "Process Approach" as advocated by the US Food and Drug Administration. (See attached example #4).

NOTE: ***For certain specialized processes, a process review completed by a process authority may be required***

E. Obtaining Current Maryland Retail "Food Service Facility" Regulations (Current COMAR 10.15.03):

- Visit the following link to access Maryland Division of State Documents

  http://www.dsd.state.md.us/COMAR/SubtitleSearch.aspx?search=10.15.03

F. Model HACCP Plan Formats (Examples #1-4) and Sample Written Employee Training Procedure (see following pages):

Model HACCP Plan - Example #1

(shown for "Cooking" step)

Facility: ABC Restaurant **Preparer:** Don Smith **Date: 00/00/00**

CCP: ___COOKING *(use one sheet per CCP)*_____

Critical Limits: Foods are cooked to temperatures below for the specified time:

Shell eggs cooked for immediate service, fish, meat, and all other potentially hazardous food not specified below cooked to **145°F for 15 seconds**;

Shell eggs cooked other than for immediate service, ground fish and meats, commercially raised game animals, and injected meats cooked to **155°F for 15 seconds**;

Whole roasts (for rare roast beef) cooked to **130°F and held for at least 112 minutes**;

Poultry; stuffed meat, stuffed pasta or poultry; or stuffing containing fish meat, or poultry cooked to **165°F for 15 seconds**;

Raw animal foods cooked to **165°F and held for 2 minutes**, when using microwave oven for cooking;

Fruits, vegetables for hot holding cooked to at least **135°F**; and

Undercooked seared beefsteak cooked to **145° F for 15 seconds, must have a "cooked" color change on surface**, and regulatory approval of process used.

Monitoring: Internal product temperature of food is taken at completion of cooking time using a thermocouple with a metal probe.

Corrective Actions: If food has not reached required temperature for the specified time, continue cooking. Recheck temperature after additional cooking to make sure standard is reached.

Verification: Stipulate who (manager/cook/supervisor) will review cooking temperature logs. *(Note: An alternate method would be for the supervisor to visually observe that temperatures are taken at the proper times and, if not satisfactory, food is not removed the cooking equipment until the required time and temperature standards are met.)*

Equipment: Oven, Range, metal stem probe/thermocouple

Menu items using this CCP:

Fried chicken (***cook,*** hot hold, cool, prepare for salad, cold hold, serve)

Macaroni and Cheese (***cook,*** hot hold, cool, reheat, hot hold, serve or discard)

Mashed Potatoes (***cook,*** hot hold, cool, reheat, hot hold, serve or discard)

Rice (***cook,*** hot hold, cool, reheat, hot hold, serve or discard)

Model HACCP Plan - Example #1 (Listing CCPs Separately)

(shown for "Cooling" step)

Facility: ABC Restaurant **Preparer:** Don Smith **Date: 00/00/00**

CCP: ___COOLING *(use one sheet per CCP)*_____

Critical Limits:

Ready-to-eat potentially hazardous foods for cold service are cooled to an internal temperature of 41°F within 4 hours.
Cooked foods are cooled from 135° F to 70° F within 2 hours and from 70° to 41° F within an additional 4 hours.

Monitoring:

Internal temperatures of **ready-to-eat potentially hazardous food for cold service** are taken every 1.5 hours with a metal stem thermometer.

Internal product temperature of **cooked foods** are taken at 1.5 and 6 hours with a metal stem thermometer.

Corrective Actions:

If **ready-to-eat potentially hazardous food** is >41°F for more than 4 hours **or** if time out of temperature is unverifiable, **discard.**

If **cooked** food is not ≤ 70° F at 1.5 hours, food will be iced, stirred, and/or broken into smaller containers. Recheck temperature in another .5 hours, If food not ≤ 70°F, **discard**.
Cooked food that cooled properly in the first two hours but has not reached 41° F within 6 hours **will be discarded.**

Verification:

Supervisor will review cooling logs. *(Note: An alternate method would be for the supervisor to visually observe that temperatures are taken at the proper times and, if not taken or not satisfactory, the corrective actions listed above are taken.)*

Equipment:

Blast chiller**,** Walk-in cooler, metal stem probe/thermocouple

Menu items using this CCP:

Fried chicken (cook, hot hold, ***cool,*** prepare for salad, cold hold, serve)

Macaroni and Cheese (cook, hot hold, ***cool,*** reheat, hot hold, serve or discard)

Mashed Potatoes (cook, hot hold, ***cool,*** reheat, hot hold, serve or discard)

Rice (cook, hot hold, ***cool,*** reheat, hot hold, serve or discard)

HACCP Plan (Example #1 Form)

(shown for "Reheat" step)

Facility: ABC Restaurant **Preparer:** Don Smith **Date: 00/00/00**

CCP: __REHEAT *(use one sheet per CCP)*_____

Critical Limits:

***Commercially processed**, hermetically sealed or intact packaged foods from a food processing plant that is inspected by a food regulatory authority will first be reheated within 2 hours to a minimum internal temperature of **135°F for 15 seconds,** prior to hot holding.

Food that is cooked, cooled, and refrigerated will be reheated within 2 hours to a minimum internal temperature of **165°F for 15 seconds** prior to hot holding.

Monitoring:

Internal product temperature of food is taken every 30 minutes using a thermocouple with a metal probe.

Corrective Actions:

If food has not reached required time and temperature within 2 hours, **discard.**

Verification:

Stipulate who (manager/cook/supervisor) will review cooking temperature logs. *(Note: An alternate method would be for the supervisor to visually observe that temperatures are taken and if critical limit not satisfactorily met, appropriate corrective action is taken.)*

Equipment:

Stove top, convection oven, metal stem probe/thermocouple

Menu items using this CCP:

Rotisserie Chicken, ***smoked turkey wings, ***hot dogs, ***canned green beans, ***canned corn (reheat***, hot hold, serve or discard)

Fried Chicken, macaroni and cheese, mashed potatoes, rice (cook, hot hold, cool***, reheat***, hot hold, serve or discard)

HACCP Plan (Example #1 Form)

Facility: **Preparer:** **Date:**

CCP: _____

CCP and Critical Limits:
Monitoring:
Corrective Actions:
Verification:
Equipment:
Menu items using this CCP:

Model HACCP Plan - Example #2 (Chart Method)

Facility: ABC Restaurant **Preparer:** Don Smith **Date: 00/00/00**

Food Item(s): Chicken Noodle Soup

Flow diagram or descriptive narrative of the food preparation steps:
Cook chicken (CCP 1) -> Prepare soup -> Cook (CCP 1) -> Hot Hold (CCP 2) -> Cool (CCP 3) -> Reheat (CCP 4) -> Hot Hold (CCP 2) -> Discard

HACCP Chart

Critical Control Points (CCP)	Monitoring Procedures	Corrective Action
CCP 1 **Cook** chicken to a minimum internal temperature of 165° F for 15 seconds. Heat soup to a minimum of 165° F for 15 seconds.	Check internal temperature	Continue to cook until food reaches 165° F for 15 seconds.
CCP 2 **Hot Hold** soup at a minimum of 135° F.	Check internal temperature of the soup every 2 hours.	Rapidly reheat soup to 165° F for 15 seconds if verifiably out of temperature for less than 4 hours. **Discard** if greater than 4 hours or time out of temperature unverifiable.
CCP 3 **Cool** soup from 135° F to 70° F within 2 hours, and from 70° F to 41° F within an additional 4 hours.	Check internal temperature of soup at 1.5 and six hours.	If soup has not reached 70° F in the first 1.5 hours, separate into smaller containers and place in freezer. Recheck temperature in .5 hours-if not 70°F or lower-**discard.** If soup cooled properly within first 2 hours but has not cooled to 41° F or less within additional 4 hours, **discard**.
CCP 4 **Reheat** cooled soup, as needed, to 165° F for 15 seconds within 2 hours. (Hot hold for service using CCP 2 above. Any soup remaining on steam table at end of day will be discarded.)	Check internal temperature.	Continue to reheat until food reaches 165° F for 15 seconds. If desired temperature not reached within 2 hours, **discard**.

Verification: Supervisor will monitor temperature logs, and/or observe temperature monitoring and calibration practices.

Equipment utilized at each Critical Control Point listed in above chart:
CCP 1: Oven, Range, metal stem probe/thermocouple
CCP 2: Soup wells on steam table, metal stem probe/thermocouple
CCP 3: Walk-in refrigerator, freezer, metal stem probe/thermocouple
CCP 4: Oven, Range, metal stem probe/thermocouple

HACCP Plan (Example #2 Form)

Facility: **Preparer:** **Date:**

Food Item:

Flow diagram or descriptive narrative of the food preparation steps:

HACCP Chart

Critical Control Points (CCP)	Monitoring Procedures	Corrective Action

Verification:

Equipment utilized at each Critical Control Point listed in above chart:
CCP 1:
CCP 2:
CCP 3:

Model HACCP Plan - Example #3 (Recipe Method)

Facility: ABC Restaurant **Preparer:** Don Smith **Date: 00/00/00**

Menu Item: Hamburger Pie

Ingredients	***Procedures***	***CCP?***	***Monitoring Procedure***	***Corrective Action***	***Verification Procedures***
10 lbs ground beef	Thaw meat in walk-in cooler	No			
1 lb each onions, celery, green pepper. 2 pounds American cheese	Wash and dice. Use immediately or store in cooler. Shred cheese and store in cooler until needed.	No			
¾ gallon tomato soup, 2 tsp. Worcestershire sauce, 2 T salt, 1 T pepper	**Braise** beef, onions and peppers on stove until the mixture reaches 155° F. Add remaining ingredients and return pot to 155° F.	**Yes**	Monitor internal temperature with stem thermometer periodically during cooking process.	Continue cooking.	Manager checks thermometer calibration log and observes temperature monitoring by employees.
1 bag Mashed Potato Flakes	Prepare potatoes according to directions on bag. Spread into pans. Top with beef mixture and cheese.	No			
	Bake pie in convection oven at 325° F for approximately 1 hour, until internal temperature reaches 155° F for 15 seconds.	**Yes**	Monitor internal temperature with stem thermometer periodically during cooking process.	Continue cooking.	Manager checks thermometer calibration log and observes temperature monitoring by employees.
	Place on steam table for **hot holding** at 135° F.	**Yes**	Check product internal temperature hourly.	**Discard** if product found below 135° F for more than 4 hours. If below 135° F for less than 4 hours, rapidly reheat using procedure below.	Manager checks thermometer calibration log and observes temperature monitoring by employees.
	Cool by placing un-served product in shallow pans with product thickness of no more than 2". Cool in blast chiller from 135° F to 70° F within 2 hours, and from 70° F to 41° F within an additional 4 hrs.	**Yes**	Check product internal temperature every 1.5 hours.	Use ice bath, stir and place food in smaller portions- if food has not cooled to 70° F within 1.5 hours. Recheck temperature in another 0.5 hours. If food is not. ≤ 70°F **Discard**. Food that cooled properly in the first two hours but has not reached 41° F within 6 hours **will be discarded.**	Manager observes procedure and reviews temperature logs.
	Reheat product in convection oven to 165° F for 15 seconds, within 2 hours.	**Yes**	Check product internal temperature	Continue cooking or **discard** if desired temperature not reached within 2 hours.	Manager checks thermometer calibration log and observes temperature monitoring by employees.

HACCP Plan (Example #3 Form)

Facility: **Preparer:** **Date:**

Menu Item:

Ingredients	*Procedures*	*CCP?*	*Monitoring Procedure*	*Corrective Action*	*Verification Procedures*

HACCP Plan - Example #4 (Process Approach)

Source- 2013 FDA Model Food Code, Annex 4, Section 4(C)

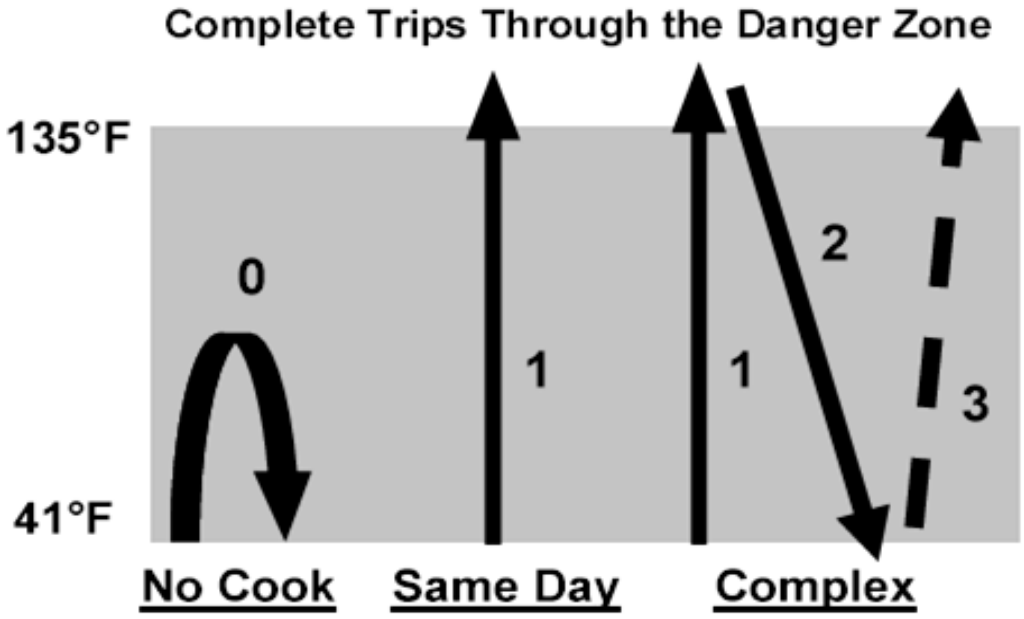
Most food items produced in a retail food service establishment can be categorized into one of three preparation processes based on the number of times the food passes through the temperature danger zone between 41°F and 135°F:

- **Process 1: <u>Food Preparation with No Cook Step,</u>** sample flow: **Receive –> Store –> Prepare –> Hold –> Serve** (other food flows are included in this process, but there is *no cook step* to destroy pathogens)

- **Process 2: <u>Preparation for Same Day Service,</u>** sample flow: **Receive –> Store –> Prepare – > Cook – > Hold –> Serve** (other food flows are included in this process, but there is *only one trip* through the temperature danger zone)

- **Process 3: <u>Complex Food Preparation,</u>** sample flow: **Receive –> Store –> Prepare –> Cook –> Cool –> Reheat –> Hot Hold –> Serve** (other food flows are included in this process, but there are always *two or more complete trips* through the temperature danger zone)

A summary of the three food preparation processes in terms of number of times through the temperature danger zone can be depicted in a Danger Zone diagram. Although foods produced using process 1 may *enter* the danger zone, they do not pass all the way through it. Foods that go through the danger zone only once are classified as Same Day Service, while foods that go through more than once are classified as Complex food preparation.



Model HACCP Plan - Example #4 (Sample Charts)

Facility: ABC Restaurant **Preparer:** Don Smith **Date: 00/00/00**

Process #1, Food Preparation with no Cook Step

Menu Items: Tuna and Chicken Salads, Cold Meat Sandwiches, Cut Melons

CCP Procedures and equipment	***Monitoring***	***Corrective Action***	***Verification***
Cool in walk-in refrigerator at 41°F or below within 4 hours, keep in **cold storage** at 41°F or below until service	Check internal product temperature with a metal stem probe at 2 and 4 hours.	Use ice bath if food has not cooled to 41°F within 2 hours. **Discard** product that does not reach 41°F within 4 hours..	Manager review of temperature monitoring practices and calibration logs
Cold hold at 41°F or below in sandwich prep unit until service.	Check internal product temperature every 2 hours with a metal stem probe.	**Discard** product that is found out of temperature for more than 4 hours, (or if time out of temperature cannot be determined).	Manager review of temperature monitoring practices and calibration logs

Process #2, Food Preparation for Same Day Service (Refrigerated storage per Process #1)

Menu Items: Baked Chicken, Ground Beef, Whole muscle steak, Fish Filets, Cooked Vegetables

CCP Procedures and equipment	***Monitoring***	***Corrective Action***	***Verification***
Cook (oven, stovetop, grill, or fryer) to: Chicken 165°F for 15 seconds Ground Beef 155°F for 15 seconds Whole muscle meat, fish 145°F for 15 seconds Vegetables 135°F	Cooks take random internal final cook temperatures with metal stem probe.	Continue cooking until final required cook temperature is achieved.	Manager review of production logs
Hot hold on steam table at 135°F or higher. (Any food left on the steam table at the end of the day will be discarded).	Check product internal temperature every 2 hours with metal stem probe.	Rapidly reheat food to 165°F, if food is out of temperature <4hours. **Discard** food if out of temperature >4 hours.	Manager review of temperature monitoring practices or logs

Process #3, Complex Food Preparation (Cold store per Process #1, cook and hot hold per Process #2)

Menu Items: Soups, Lasagna, Meatballs

CCP Procedures and equipment	***Monitoring***	***Corrective Action***	***Verification***
Place un-served product in shallow pans with product thickness of no more than 2" **Cool** in walk-in refrigerator from 135°F to 70°F within 2 hours, and from 70°F to 41°F within an additional 4 hours.	Check internal temperature of food at 1.5 and 6 hours with metal stem probe.	If product has not reached 70°F in the first 1.5 hours, separate into smaller containers and place in freezer. Recheck temperature in .5 hours. If temp is above 70°F-**discard**. If cooled properly in first 2 hours but food has not reached 41°F within 4 additional hours, **discard**.	Manager review of temperature monitoring practices or logs.
Reheat food in convection oven or *microwave to 165°F for 15 seconds, within 2 hours. (Hot hold for service using Process 2 above. Any soup remaining on steam table at end of day will be discarded.)	Check internal food temperature with metal stem probe.	Continue to reheat within 2 hours until 165°F for 15 seconds, is reached. If desired time and temperature not reached within 2 hours-**discard.** (*using microwave reheat to desired temp. stir, cover, and let stand for 2 minutes)	Manager review of production logs

HACCP Plan (Example #4 Forms)

Facility: **Preparer:** **Date:**

Process #1, Food Preparation with no Cook Step

Menu Items:

CCP Procedures	*Monitoring*	*Corrective Action*	*Verification*

Process #2, Food Preparation for Same Day Service

Menu Items:

CCP Procedures	*Monitoring*	*Corrective Action*	*Verification*

Process #3, Complex Food Preparation

Menu Items:

CCP Procedures	*Monitoring*	*Corrective Action*	*Verification*

HOWARD COUNTY HEALTH DEPARTMENT

Bureau of Environmental Health
8930 Stanford Blvd | Columbia, MD 21045
410.313.2640 - Voice/Relay
410.313.2648 - Fax
1.866.313.6300 - Toll Free

Maura J. Rossman, M.D., Health Officer

Written Procedures for Employee HACCP Training

Provide a description of how you will train your employees on your HACCP Plan. Below is a SAMPLE that you can adapt to your situation.

All employees will be trained to use the approved HACCP plan prior to beginning employment and periodically after that. Training will include identification of the processes that are critical control points, how these processes will be monitored, and what corrective actions must be taken when critical controls are violated. The approved HACCP plan will be available in the food preparation area at all times.

Food temperature logs* will be used to monitor product temperatures during the preparation process. These completed logs will be maintained in the food preparation area, and held for review by management, as part of the HACCP monitoring system.

Training in basic sanitation will include:

- hand washing and glove use
- methods for cleaning and sanitizing:
  - utensils
  - equipment
  - food preparation surfaces.
- weekly calibration of a metal stem thermometer
- temperature monitoring

*Note- Use of logs for record keeping is strongly encouraged but not required, as long as the facility can demonstrate that temperatures are routinely monitored, as described in the HACCP plan, and that the specified corrective actions are taken when critical limits are not met.

12/2019