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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. Facilities which serve only hand dipped ice cream or commercially packaged potentially hazardous foods 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 serve food in a health care facility, as defined in COMAR 10.15.03.02B(38).

B. General Food Handling Information and Procedures (only required for facilities classified as "high" or "moderate"):

1. Describe how you will ensure that all foods are obtained from approved sources.
2. Specify how cross-contamination from raw to cooked or ready-to-eat foods will be prevented.
3. Indicated how frozen potentially hazardous foods will be thawed.
4. Indicate how potentially hazardous food will be cooled, i.e. ice baths, shallow pans, rapid chill.
5. Specify whether any prepared foods are distributed off-premises.
6. Specify whether any refrigerated foods are received which require storage temperatures below 41°F, i.e. pasteurized crab meat at 38°F.
7. Indicate whether reduced oxygen packaging of food, as defined in COMAR 10.15.03.02B(63), will be conducted onsite.
8. Include specific information for any processes or procedures which incorporate:
   - "Time-only" control (see COMAR 10.15.03.08),
   - Serving raw or undercooked animal foods (see COMAR 10.15.03.10 C, D &F).
   - Acidification of ready to serve food products.

C. HACCP Plan Required Contents

The plan must include:

1. Identification of Critical Control Points (CCP). CCPs generally include cooking, cooling, reheating, cold holding, 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, is not a CCP step. 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 that will be taken if there is a loss of control at a CCP due to such factors as employee error, equipment malfunction, or power failure.
5. Verification procedures that 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.
7. Written procedures for employee training on HACCP procedures (see attached example).

D. Processes

PROCESS 1

Food items do not go through a cook step. For example: commercially prepared ready-to-eat foods, cold cut deli sandwiches, salads in which ingredients are not pre-cooked, cut melons and sprouts.

Menu items prepared under Process 1:

_____

_____

Critical Control Point	Critical Limit	Monitoring Procedures	Corrective Actions	Equipment Used
Receiving and Storage				
Processing (Washing, Cutting, Assembling)				
Cold Holding				

PROCESS 2

Food items prepared for same day service with no reuse of leftovers. For example: cooked fast food meals, soups, rice, and other cooked foods where leftovers are not saved. **No cooling** of foods for ingredients in other dishes.

Menu items prepared under Process 2:

_____

_____

Critical Control Point	Critical Limit	Monitoring Procedures	Corrective Actions	Equipment Used
Receiving and Storage				
Cold Holding				
Cooking				
Hot Holding				

PROCESS 3

Complex Preparation. Food items cooked and cooled, then possibly reheated. Food items travel through the temperature danger zone more than one time. Includes soups, salads, sauces and meats that are cooled and reheated.

Menu items prepared under Process 3:

_____

_____

Critical Control Point	Critical Limit	Monitoring Procedures	Corrective Actions	Equipment Used
Receiving and Storage				
Cold Holding				
Cooking				
Hot Holding				
Cooling				
Reheating				

WRITTEN PROCEDURES FOR EMPLOYEE HACCP TRAINING
(SAMPLE)

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 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 procedures and methods for cleaning and sanitizing utensils, equipment, and food preparation surfaces. All employees will be trained to use and calibrate a metal stem thermometer, and will be required to check and recalibrate thermometers weekly.

*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 specified corrective actions are taken when critical limits are not met.

FOOD	MINIMUM INTERNAL TEMPERATURE		HOLDING TIME AT SPECIFIED TEMPERATURE
	°F	°C	
Shell eggs. Fish, meat, and all other potentially hazardous foods not specified in Chart 1.	145	63	15 seconds
Shell eggs not prepared for immediate service, ratites, comminuted fish and meats, game animals commercially raised for food, and injected meats.	145	63	3 minutes
	or		
	150	66	1 minute
	or		
	155	68	15 seconds
	or		
	158	70	< 1 second
Whole roasts (beef, corned beef, pork and cured pork roasts such as ham). Holding time may include post oven heat rise. Minimum oven temperature for roasts greater than 10 pounds is 250°F for dry heat. For roasts less than 10 pounds, minimum oven temperatures are 350°F for dry heat and 325°F for convection ovens. Oven temperature may be 250°F or less for high humidity cooking (relative humidity greater that 90 percent for at least 1 hour or in a moisture impermeable bag that provides 100 percent humidity).	130	54.4	112 minutes
	or		
	131	55	89 minutes
	or		
	133	56.1	56 minutes
	or		
	135	57.2	36 minutes
	or		
	136	57.8	28 minutes
	or		
	138	58.9	18 minutes
	or		
	140	60	12 minutes
	or		
	142	61.1	8 minutes
	or		
	144	62.2	5 minutes
	or		
	145	62.8	4 minutes
	or		
	147	63.9	134 seconds
	or		
	151	66.1	54 seconds
	or		
	155	68.3	22 seconds
	or		
	158	70	none
Poultry; stuffed meat, pasta, or poultry, and exotic bird species; wild game animals; and stuffing containing fish, meat, or poultry. Reheat of leftovers for hot holding.	165	74	15 seconds
Raw foods of animal origin cooked in a microwave oven.	165	74	Hold for 2 minutes after removing from microwave oven
Fruits and vegetables and ready-to-eat commercially processed foods cooked for hot holding.	135	57	None
Ready-to-eat commercially processed foods for immediate service.	None		None

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HACCP CHART

STEP (Control Point / CP or Critical Control Point / CCP)	CRITICAL LIMIT (What is the standard that must be met?)	MONITORING PROCEDURE (Is the critical limit being met?)	SAMPLE CORRECTIVE ACTIONS (How can you protect the public and bring the process back into control)	VERIFICATION (Do your procedures ensure the critical limit is being met?)
RECEIVE	• Approved source • Free from spoilage • Proper temperature • Egg and shellfish receipts • Packaging intact (i.e., not torn or damaged)	• Inspect food • Measure and document food temperature • Inspect packaging • Check invoice (receiving only what was ordered?)	• Reject the food • Contact supplier • Change delivery schedule, type, or quantity of food ordered • Train employees on proper receiving practices	• Review temperature logs • Review invoices • Inspect delivery vehicle to determine if clean and refrigerated (if appropriate) • Review corrective action records
STORE	• Maintain cold food at 41°F or below • Protect from contamination • Follow the recommended sell-by / use-by dates • Label and date food for proper rotation • Store food off the floor	• Measure and document food temperature • Inspect food for signs of contamination • Check refrigeration units (overstocked? clean?) • Measure and document equipment temperatures • Calibrate food and equipment thermometers	• Discard contaminated food • Cover food • Relocate food • Provide adequate refrigeration • Repair refrigeration units • Repair or replace non-functioning thermometers • Train employees on proper food storage practices	• Review food temperature logs • Review equipment temperature logs • Review equipment maintenance invoices • Review calibration logs • Review corrective action records
COLD HOLD	• 41°F or below • Frozen foods at 0°F or below • Pasteurized crab meat at 38°F or below • Shell eggs at 45°F or below • Shellfish at 45°F or below	• Measure and document food temperature • Inspect for signs of contamination • Check for overstocking of refrigeration units) • Measure and document equipment temperatures • Calibrate food and equipment thermometers • Check food labels and dates	• Adjust thermostat to a lower setting • Use proper equipment • Discard food if above 41°F for more than 2 hours • Cover food • Relocate food • Provide adequate refrigeration • Repair refrigeration units • Repair or replace non-functioning thermometers • Train employees on proper cold holding practices	• Review food temperature logs • Review equipment temperature logs • Review equipment maintenance invoices • Review calibration logs • Review corrective action records • Review employee training logs

STEP (Control Point / CP or Critical Control Point / CCP)	**CRITICAL LIMIT** (What is the standard that must be met?)	**MONITORING PROCEDURE** (Is the critical limit being met?)	**SAMPLE CORRECTIVE ACTIONS** (How can you protect the public and bring the process back into control)	**VERIFICATION** (Do your procedures ensure the critical limit is being met?)
THAW	• In a refrigerator at 41°F or below • Under running potable water less than 70°F • In a microwave as part of the cooking process	• Measure and document food temperatures • Measure and document equipment or water temperatures • Check to see that food and equipment thermometers are properly calibrated	• Refrigerate for a longer period of time • Discard product if above 41°F for more than 2 hours • Cook from a frozen state • Calibrate food and equipment thermometers • Train employees on proper food thawing practices	• Review food temperature logs • Review equipment temperature logs • Review equipment maintenance invoices • Review calibration logs • Review corrective action records • Review employee training logs
COMBINE / PROCESS	• Wash hands properly • Wash and sanitize utensils and work surfaces • Wear single use gloves when handling ready-to-eat food • Pre-chill ingredients for ready-to-eat food • Wash / peel raw fruits and vegetables • Food is held out of temperature control for less than 2 hours if rapidly re-chilled to 41°F • Eggs are cold held when not combined for immediate service • Minimize hand contact • Prohibit ill or infected employees from handling food • Avoid cross contamination of food, utensils, and work surfaces	• Measure and document food temperatures • Measure and document equipment or water temperatures • Check handsinks for soap, paper towels, and hot and cold water • Check sanitizer concentration • Observe handwashing practices • Observe food handling practices • Observe cleaning practices • Check for illness in employees • Check for burns, cuts, boils, or excessive jewelry on employees' hands	• Minimize the time that the food is out of temperature control • Discard food is above 41°F for more than 2 hours • Use separate areas and utensils for raw and cooked food preparation • Wear single use gloves when handling ready-to-eat food • Rapidly re-chill finished food • Decrease volume of food being prepared / out of refrigeration at one time • Use proper utensils that have been washed and sanitized • Remove ill or infected employees from food handling duties • Remove excessive jewelry and wash hands before continuing food handling duties • Train employees on proper food handling practices and equipment washing procedures	• Review food temperature logs • Review equipment temperature logs • Review equipment maintenance invoices • Review calibration logs • Review corrective action records • Review employee training logs

STEP (Control Point / CP or Critical Control Point / CCP)	**CRITICAL LIMIT** (What is the standard that must be met?)	**MONITORING PROCEDURE** (Is the critical limit being met?)	**SAMPLE CORRECTIVE ACTIONS** (How can you protect the public and bring the process back into control)	**VERIFICATION** (Do your procedures ensure the critical limit is being met?)
COOK (At required minimum temperature for at least 15 seconds, except whole roasts)	• Poultry and stuffed meats or pasta at 165°F or above • Raw foods of animal origin cooked in a microwave (hold for at least 2 minutes after cooking) • Ground beef at 155°F or above • Pork at 155°F or above • Shell eggs for immediate service, fish, other meats at 145°F • Shell eggs not for immediate service and injected meats at 155°F • Whole roasts at 130°F for 122 minutes or as specified in COMAR 10.15.03.10A(1) • Fruits and vegetables cooked for hot holding and commercially processed foods at 135°F	• Measure and document food temperatures • Measure and document equipment temperatures • Observe cooking practices • Check to see that food and equipment thermometers are properly calibrated	• Increase cooking time • Adjust thermostat to a higher setting • Use proper equipment • Cook smaller amounts of food • Relocate food • Provide adequate cooking equipment • Repair or replace non-functioning equipment or thermometers • Calibrate food and equipment thermometers • Train employees on proper cooking temperatures	• Review food temperature logs • Review equipment temperature logs • Review equipment maintenance invoices • Review calibration logs • Review corrective action records • Review employee training logs
HOT HOLD	• 135°F or above	• Measure and document food temperatures every 2 hours • Measure and document equipment temperatures • Observe hot holding practices • Check to see that food and equipment thermometers are properly calibrated	• Reheat food to at least 165°F if below 135°F for not more than 2 hours • Discard food after 2 hours • Reduce the amount of food • Preheat equipment • Cover the food to retain heat • Use shallow containers • Stir frequently • Use proper equipment • Repair or replace non-functioning equipment or thermometers • Calibrate food and equipment thermometers • Train employees on proper hot holding practices	• Review food temperature logs • Review equipment temperature logs • Review equipment maintenance invoices • Review calibration logs • Review corrective action records • Review employee training logs

STEP (Control Point / CP or Critical Control Point / CCP)	**CRITICAL LIMIT** (What is the standard that must be met?)	**MONITORING PROCEDURE** (Is the critical limit being met?)	**SAMPLE CORRECTIVE ACTIONS** (How can you protect the public and bring the process back into control)	**VERIFICATION** (Do your procedures ensure the critical limit is being met?)
COOLING	• Hot Foods: To 41°F or below within 6 hours (i.e., from 135°F to 70°F within 2 hours and from 70°F to 41°F within 4 hours) • Ready-To-Eat Foods for cold service: To 41°F or below within 4 hours	• Measure and document food temperature • Measure and document equipment temperatures • Observe cooling practices • Check to see that food and equipment thermometers are properly calibrated • Check for signs of contamination	• Refrigerate in uncovered pans with food not more than 3 inches deep • Use an ice bath with frequent stirring • Reduce the volume of food • Cook then serve immediately, eliminating the need to cool • Use a blast chiller • Provide additional refrigeration equipment • Discard hot food if above 41°F for more than 6 hours • Discard cold service foods if above 41°F for more than 4 hours • Use a cooling wand • Add ice made from potable water as an ingredient • Train employees on proper cooling practices	• Review cooling logs • Review equipment temperature logs • Review equipment maintenance invoices • Review calibration logs • Review corrective action records • Review employee training logs
REHEAT	• 165°F or above within 2 hours	• Measure and document food temperature • Measure and document equipment temperatures • Observe reheating practices • Check to see that food and equipment thermometers are properly calibrated	• Increase the temperature of the reheating equipment • Increase the reheating time, but keeping within 2 hours • Reduce the volume of food • Use a more rapid reheating procedure • Prepare only the amount needed for a meal to avoid leftovers • Discard leftovers • Purchase additional cooking equipment • Train employees on proper reheating practices	• Review food temperature logs • Review equipment temperature logs • Review equipment maintenance invoices • Review calibration logs • Review corrective action records • Review employee training logs
DELIVER	• Cold Foods: At 41°F or below • Hot Foods: At 135°F or above	• Measure and document food temperature • Measure and document equipment temperatures • Check to see that food and equipment thermometers are properly calibrated	• Use insulated or temperature controlled equipment or containers • Use temperature controlled vehicles • Reduce delivery area • Keep food covered during transport • Train employees on proper delivery practices	• Review food temperature logs • Review equipment temperature logs • Review equipment maintenance invoices • Review calibration logs • Review corrective action records • Review employee training logs