Building your food safety program – Part 2

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Building Your School Food Safety Program—Let's Get Started

Components of a Process Approach to HACCP

- STEP 1. Prerequisite programming including development, document & implement SOP's
- STEP 2. Identify & document all menu items
- STEP 3. Identify Control Measures & Critical Limits
- STEP 4. Establish monitoring procedures and documentation
- STEP 5. Establish corrective actions and documentation
- STEP 6. Record keeping
- STEP 7. Verify, review & revise

Activities STEP 1

Activity 1. Prerequisite Program Assessment

Activity 2. Standard Operating Procedure Checklist

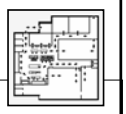
Activity 1. Prerequisite Program Assessment

Does your school district have prerequisite programs necessary for HACCP implementation?

Prerequisite Programs

- Supplier control
- Equipment installation and maintenance
- Cleaning and sanitation
- Personal hygiene
- Food safety training
- Chemical control
- Receiving, storing & transporting
- Traceability & recall
- Pest control
- Food temperature control

These will include some SOPs



Prerequisite Program Assessment

Mayfield High School HACCP Case Study

Exhibit 10: Prerequisite Program Checklist

Prerequisite Program Checklist

Instructions: Complete this checklist to identify which prerequisite programs you have implemented in your school district and which ones need to be implemented. There may a prerequisite program listed that may not be applicable (N/A) to your school district.

SOPs

Prerequisite Program	Yes	No	N/A	Task Assigned to by
Supplier Control				
Letter on file from all vendors stating that they have a HACCP program or follow good manufacturing practices		✓		Sam by 1/7/06
Equipment Installation and Maintenance				
Equipment is installed properly	✓			
Equipment maintenance schedules are in place and documented	✓			
Calibration schedules are in place and documented	✓			
Cleaning and Sanitation				
Written procedures for cleaning and sanitizing equipment and facility are in place and documented		✓		Sally by 12/15/05
Cleaning and sanitizing procedures are followed	✓			
A master cleaning and sanitation schedule is in place		✓		Sam by 1/7/06
Personal Hygiene				

Activity 2. Standard Operating Procedure Checklist

Does the school district have *written* standard operating procedures (SOP's) related to food safety?

The way we do it around here…

sop.nfsmi.org/HACCPBasedSOPs.php

Standard Operating Procedures Assessment

Mayfield High School HACCP Case Study

Exhibit 11: SOP Checklist

CHECKLIST
For Standard Operating Procedures

Instructions: Written standard operating procedures (SOP) are needed to guide the food safety and Hazard Analysis Critical Control Point (HACCP) program in your school. For each SOP, check **YES** if you have a written SOP, **NO** if you do not have a written SOP but you need to have it, and **N/A** if the SOP is not related to your school or district. Add other SOP as needed within each category.

Standard Operating Procedure	Yes	No	N/A	To be written by & date
Personnel				
Employee health and personal hygiene	✓			
Glove and utensil use	✓			
Contact with blood and body fluids		✓		Nurse - ASAP
Handwashing	✓			
Tasting method		✓		SAM - ASAP
Eating and drinking in the workplace		✓		SAM - ASAP
Other:				
General Equipment Use and Maintenance of Facilities				
Cleaning and sanitizing	✓			
Laundry and linen use		✓		Sally 1/4/06
Machine warewashing	✓			
Manual warewashing	✓			
Facility and equipment maintenance		✓		Maintenance Director
Pest control		✓		

- Cleaning and Sanitizing Food Contact Surfaces
- Controlling Time and Temperature During Preparation
- Cooking Potentially Hazardous Foods
- Cooling Potentially Hazardous Foods
- Date Marking Ready-to-Eat, Potentially Hazardous Foods
- Handling a Food Recall
- Holding Hot and Cold Potentially Hazardous Foods
- Personal Hygiene and Washing Hands
- Preventing Contamination at Food Bars
- Preventing Cross-Contamination During Storage and Preparation
- Receiving Deliveries
- Reheating Potentially Hazardous Foods
- Serving Food
- Storing and Using Poisonous or Toxic Chemicals
- Transporting Food to Remote Sites (Satellite Kitchens)
- Using and Calibrating Thermometers
- Using Suitable Utensils When Handling Ready-to-Eat Foods
- Using Time Alone as a Public Health Control to Limit Bacteria Growth in Potentially Hazardous Foods
- Washing Fruits and Vegetables

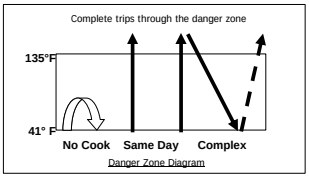
Standard Operating Procedures

Guidelines for how procedures will be performed in a foodservice operation:

- Why
- What
- How
- When
- Who
- How verified

STEP 2
Identify & Document All Menu Items

- No Cook Step
- Same Day Service
- Complex Food Preparation



Danger Zone Diagram

Step 2
Grouping Menus Example

NO COOK	SAME DAY SERVICE	COMPLEX
Three Bean Salad	Oven Fried Chicken	Chili Con Carne with Beans
Pickle Spear	All Beef Hot Dog	Lasagna
Fresh Relishes with Dip	Barbecued Pork Sandwich	Chicken Noodle Casserole
Applesauce	Baked Beans	Vegetable Beef Soup
Coleslaw	Little Smokies	Turkey/Pork Gravy
Apple Wedges	Macaroni & Cheese	
Tossed Salad	Fish Nuggets	
Sliced Peaches	Cornbread	

Before we begin step 3, we need some definitions…

Process Approach to HACCP - Definitions

Hazard – any physical, chemical or biological agent that can make food unsafe to consume

Critical Control Point (CCP) – An operational step in a food preparation process at which control can be applied and is ***essential*** to prevent or eliminate a hazard or reduce it to an acceptable level.

Critical Limit – A measurement that must be met to ensure that a CCP effectively controls a hazard.

Monitoring – the act of determining that a critical limit has been met.

Corrective action – what is done if the critical limit has not been met

Record – documentation of monitoring observations and verification activities.

Specific Example

Salmonella in raw chicken is considered a **hazard**

Cooking is the **critical control point** to eliminate the hazard of *Salmonella*

165°F is the **critical limit** that must met to ensure that the hazard has been eliminated.

Monitoring is by *calibrated* thermometer

Documented monitoring is what the cook writes down

If the temperature is not 165°F, then a **corrective action** must be taken – the chicken is allowed to cook to a higher temperature.

Record is kept by the cook who provides it to the management for keeping.

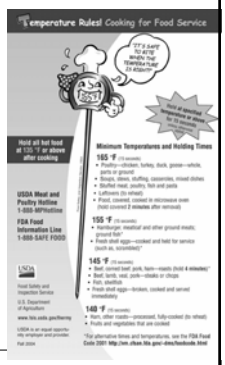
The Critical Control Points and their Critical Limits in Food Service

Cooking – proper to internal temperature

Cooling – 2 hrs to less than 70°
6 hrs to less than 41°

Hot/Cold Holding - >140° or <41°

Reheating – 165° in less than 2 hrs



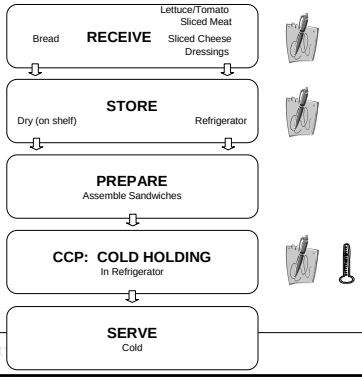
STEP 3
Critical Control Points for Each Process Type

For Process #1 – No Cook:

- Cold holding or limiting time in the danger zone to inhibit bacterial growth and toxin production (e.g., limiting time would be holding at room temperature for 4 hours and then discarding)

NO COOK Process Flow

Deli Sandwiches, Full-Service Kitchen



STEP 3

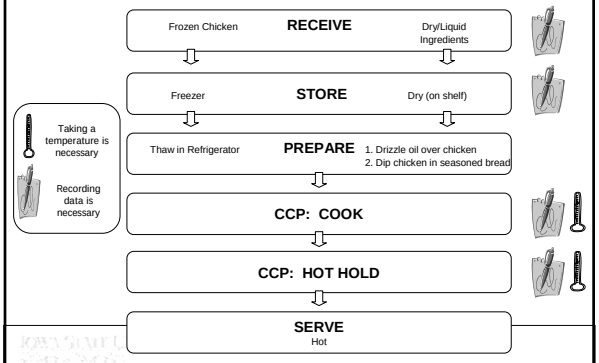
Critical Control Points for Each Process Type

For Process #2 – Same Day Service:

- Cooking to destroy bacteria and other pathogens
- Hot holding or limiting time in the danger zone to prevent the outgrowth of spore-forming bacteria

SAME DAY SERVICE Process Flow

Oven Fried Chicken, Full-Service Kitchen



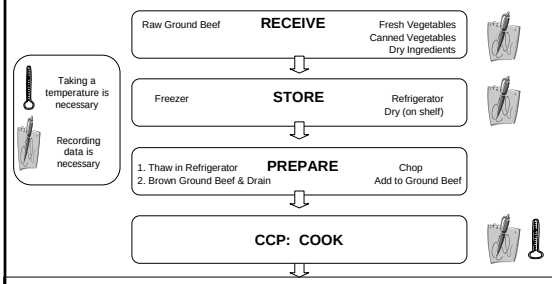
Critical Control Points for Each Process Type

For Process #3 – Complex Food Preparation:

- Cooking to destroy bacteria and other pathogens
- Cooling to prevent the outgrowth of spore-forming bacteria
- Hot and cold holding or limiting time in the danger zone to inhibit bacterial growth and toxin formation
- Reheating for hot holding, if applicable

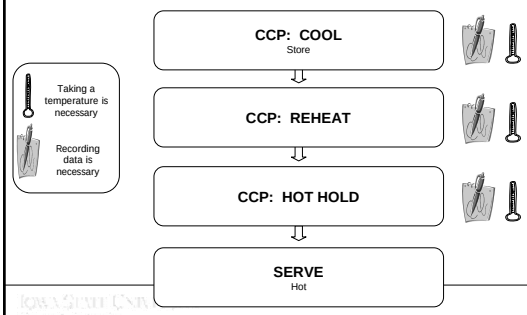
COMPLEX Process Flow

Chili Con Carne, Full Service Kitchen



COMPLEX Process Flow

Chili Con Carne, Full Service Kitchen (con't)



Oven Fried Chicken

Meat/Meat Alternate — Main Dishes — D-29

Ingredients	50 Servings Weight	50 Servings Measure	100 Servings Weight	100 Servings Measure
Raw chicken, cut up, thawed (USDA-donated, whole, cut up 8 pieces)	24 lb 8 oz		49 lb	
Vegetable oil		1 ½ cups		3 cups
Enriched all-purpose flour	1 lb	3 ½ cups	2 lb	1 qt 3 ½ cups
Instant nonfat dry milk	8 oz	3 ½ cups 2 Tbsp	1 lb	1 qt 2 ½ cups
Poultry seasoning		1 Tbsp 1 ½ tsp		3 Tbsp
Ground black or white pepper		1 Tbsp		2 Tbsp
Paprika		1 ½ tsp		1 Tbsp
Granulated garlic		1 Tbsp 1 ½ tsp		3 Tbsp

Directions:

1. Place chicken pieces in large bowl. Drizzle oil over chicken. Toss to coat thoroughly.
2. In a separate bowl, combine flour, dry milk, poultry seasoning, pepper, paprika, and granulated garlic. Mix well.
3. Coat oiled chicken with seasoned flour. Arrange approximately 25 pieces of chicken on each ungreased sheet pan (18" x 26" x 1"). For 50 servings, use 3 pans. For 100 servings, use 6 pans.
4. Bake:
   Conventional oven: 400° F for 45-55 minutes
   Convection oven: 350° F for 40-50 minutes
   CCP: Heat to 165° F or higher for at least 15 seconds.
5. Transfer to steamtable pans (12" x 20" x 2 ½"). For 50 servings, use 2 pans. For 100 servings, use 4 pans.
6. CCP: Hold for hot service at 135° F or higher.

SERVING:	YIELD:	VOLUME:
1 portion (1 breast, or 1 drumstick and 1 wing, or 1 thigh with back) provides 2 oz equivalent meat/meat alternate.	**50 Servings:** about 21 lb 5 oz	**50 Servings:** 2 steamtable pans
	100 Servings: about 42 lb 10 oz	**100 Servings:** 4 steamtable pans

Cooking Potentially Hazardous Foods
(Sample SOP)

Purpose: To prevent foodborne illness by ensuring that all foods are cooked to the appropriate internal temperature

Scope: This procedure applies to foodservice employees who prepare or serve food.

Key Words: Cross-Contamination, Temperatures, Cooking

Instructions:

1. Train foodservice employees who prepare or serve food on how to use a food thermometer and cook foods using this procedure.
2. If a recipe contains a combination of meat products, cook the product to the highest required temperature.
3. Follow State or local health department requirements regarding internal cooking temperatures.
4. If State or local health department requirements are based on the *2001 FDA Food Code*, cook products to the following temperatures:
5. 145 °F for 15 seconds
   a. Seafood, beef, and pork
   b. Eggs cooked to order that are placed onto a plate and immediately served
6. 155 °F for 15 seconds
   a. Ground products containing beef, pork, or fish
   b. Fish nuggets or sticks
   c. Eggs held on a steam table
   d. Cubed or Salisbury steaks
7. 165 °F for 15 seconds
   a. Poultry
   b. Stuffed fish, pork, or beef

Cooking Potentially Hazardous Foods, continued
(Sample SOP)

4. Take at least two (2) internal temperatures of each large food item, like a turkey, to ensure that all parts of the product reach the required cooking temperature.

Corrective Action:

Continue cooking food until the internal temperature reaches the required temperature.

Verification and Record Keeping:

Foodservice employees will record product name, time, the two (2) temperatures/times, and any corrective action taken on the Cooking - Reheating Temperature Log. Foodservice manager will verify that foodservice employees has taken the required cooking temperatures by visually monitoring foodservice employees and preparation procedures during the shift and reviewing, initialing, and dating the temperature log at the close of each day. The Cooking – Reheating Temperature Log are kept on file for a minimum of one year.

Date Implemented: By:

Date Reviewed: By:

Date Revised: By:

STEP 4: Establish monitoring procedures and documentation

Documented monitoring is most important. Most records should be kept for at least 1 year.

HACCP-Based SOPs

Cooking and Reheating Temperature Log
Instructions: Record product name, time, the two temperatures/times, and any corrective action taken on this form. The foodservice manager will verify that foodservice employees have taken the required cooking temperatures by visually monitoring foodservice employees and preparation procedures during the shift and reviewing, initialing, and dating this log daily. Maintain this log for a minimum of 1 year.

Date and Time		Food Item	Internal Temperature / Time	Internal Temperature / Time	Corrective Action Taken	Initials	Verified By/ Date

An example of a cold product form

Time and temperature are critical for producing a cold sandwich. Abusive temperatures would be above 41° for longer than 2 hours.

HACCP-Based SOPs

Production Log
Instructions: Foodservice employees will record the date, product name, start and end time of production, the two temperature measurements taken, any corrective action taken, and the amount of food prepared on the Production Log. The foodservice manager will verify that foodservice employees are taking the required temperatures and following the proper preparation procedure by visually monitoring foodservice employees during the shift and reviewing, initialing, and dating the log daily. Maintain this log as directed by your State agency.

Date	Start Time	Product Name	Temp #1	Temp #2	Amount Prepared	Corrective Actions	End Time	Employee Initials	Verified By/Date

STEP 5: Establish corrective actions and documentation

Corrective actions are taken if an SOP or CCP is not met.

Examples:

Cooking – continue cooking until the internal temperature reaches required temperature

Cooling – if cooling rate is not fast enough reheat to 165° and cool by alternative methods.

Discard food if more than 2 hrs above 70° or 6 hrs above 41°

Retraining of staff may be required if SOP is not followed.

Specific Example

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165°F is the **critical limit** that must met to ensure that the hazard has been eliminated.

Monitoring is by *calibrated* thermometer

If the temperature is not 165°F, then a **corrective action** must be taken – the chicken is allowed to cook to a higher temperature.

Record is kept by the cook who provides it to the management for keeping.

STEP 6. Record keeping

There are certain written records or kinds of documentation that are needed to verify that the food safety program is working.

These records will normally involve the food safety plan and any monitoring, corrective action, or calibration records produced in the operation of the food safety program based on HACCP principles.

Recordkeeping also provides a basis for periodic reviews of the overall food safety program.

In the event your operation is implicated in a foodborne illness, documentation of activities related to monitoring and corrective actions can provide proof that reasonable care was exercised in the operation of your facility.

Types of Records to Keep

- Records documenting the SOPs
- Time and temperature monitoring records
- Corrective action records
- Verification or review records
- Calibration records
- Training logs
- Receiving logs

STEP 7. Verify, review & revise

Review and revise your food safety program at least annually or as often as necessary to reflect any changes in your facility.

- new equipment
- new menu items
- reports of illness
- comments on health inspections
- other factors that indicate how well your food safety program is working.

Determine who will review the current plan, when it will be done, and how it will be documented.

Components of a Comprehensive Food Safety Program
Directions: For each of your food service locations complete the following information. Maintain this record for a minimum of 1 year.

Component	Location	Task Comp	Date
Documented SOP			
Documented CCP			
Standardized Recipes			
No-Cook Process Worksheet			
Same Day Service Worksheet			
Complex Process Worksheet			
Monitoring			
Corrective Actions			
Record Keeping			
Verification			
Training			
Review of Food Safety Plan			

The following practices contribute to a successful food safety program:

- Providing on-going food safety training for all employees.
- Reviewing food safety principles, including SOP guidelines, for all employees on an annual basis.
- Requiring new employees, including substitutes and volunteers, to complete initial food safety training before handling food.
- Maintaining training and attendance records on all employees at each facility.
- Holding facility managers responsible for maintaining employee training standards.

Let's do an example...

Additional Resources

National Food Service Management Institute

www.nfsmi.org

FDA Food Code

http://www.cfsan.fda.gov/~dms/fc01-up.html

Iowa State University

www.schoolhaccp.org

Additional Resources, cont.

School Nutrition Association

www.schoolnutrition.org

Coalition for Food-Safe Schools

www.foodsafeschools.org