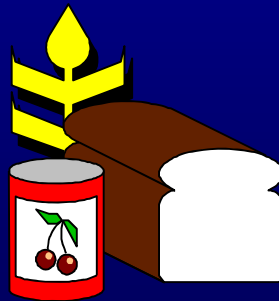


# HACCP Principle 5: Deviations and Corrective Actions

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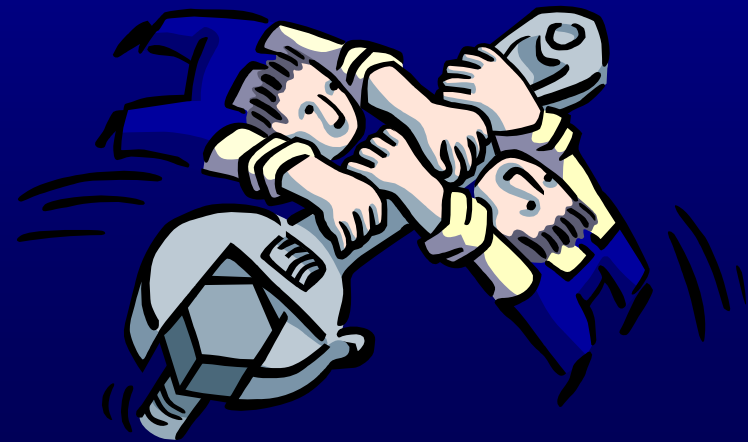


# Introduction

- **Deviations in a CCP will result in actual or potential hazard to the customer**
- **Actions must be taken to eliminate the hazard**
- **Corrective actions must be developed for each CCP**
- **HACCP requires that immediate corrective action is already assigned and the CCP will be brought back into control before production continues**

# Corrective Actions

- Immediately adjust the process and keep the product in compliance within the set criteria. In this case the corrective action is immediate, and no product is placed on hold because there has been no deviation.



# Corrective Actions

- **Stop the line. Hold all product not in compliance. Correct the problem on the line, and then continue with production. Although this is a less desirable solution, it is often the scenario in food manufacturing.**

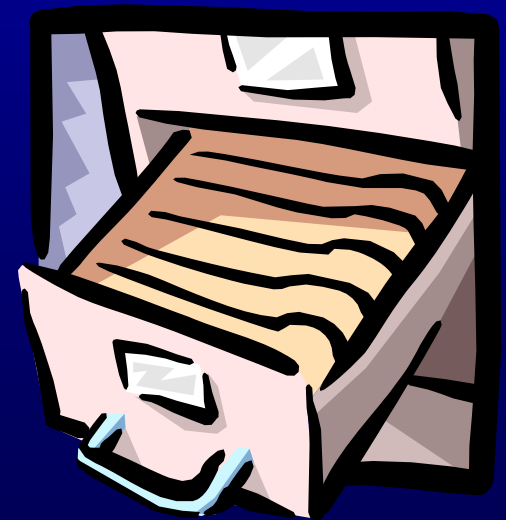


# Corrective Actions

- **If the deviation is the result of a problem in line design or equipment malfunction, a quick fix may be applied in order to continue running, but a long term solution must be sought. Non-Compliant product must be placed on hold. The re-evaluation process also becomes part of the HACCP program as the system evolves.**

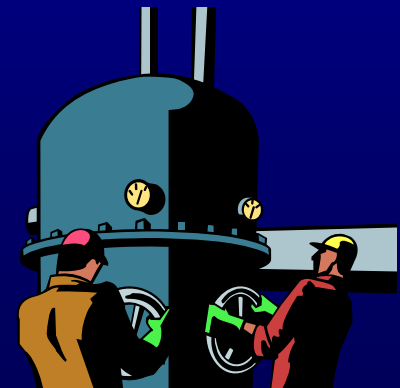
# Corrective Actions

- You must maintain records of the corrective actions which have occurred.



# Adjusting the Process

- Some deviations can be controlled automatically through the use of flow diversion valves which are designed to divert product when the temperature of the product drops below a minimum set criterion.



# Adjusting the Process

- **A operator can intercede and can take corrective action through the decision process outlined in the HACCP program.**
- **Some product may not be able to be saved, other may be.**
- **A corrective action should be designed into the product line and the HACCP system.**



# Examples of Commonly Adjusted Factors to Maintain Control

- Time
- Flow rate
- Temperature
- Humidity
- Pressure
- Vacuum
- Chlorine content
- pH, Acidity
- Personnel practices
- Ingredient concentrations
- Water Activity

# Examples of Corrective Actions

- **Control all time/temperature dependent operations by adjusting either of the two variables while the line is still running**
- **Reroute ingredients not meeting specific criteria to another process line where the criteria are not crucial to the final safety of the product. Example: freezing, canning or cooking.**
- **If metal contamination is suspected, run product through metal detection equipment.**

# Review Records to Identify Trends

- Monitor data to alert supervisors and operators to avert a deviation at a CCP.
- Compare all data to original limits rather than yesterday's data.



# Responsibility for Decision Making

- **Responsibility for decision making needs to be clearly delineated early on in the assignment of monitoring responsibilities.**
- **An individual knowledgeable in CCP control must have the authority to make quick decisions on the production floor.**
- **The individual responsible for the action must record on the CCP data sheet what action was taken and by whom.**

# CCP Monitoring Sheet

CCP #7	Pasteurizer filter inspection	Haccp plan No. 001	
Monitoring procedure	Visually inspect the filter to ensure it is intact	Frequency: 2x daily at start up and at shut down	
Corrective action:	Replace the filter and contact the operations manager regarding holding of product		
Date and time	Result	Action Taken	Signature

# Product Held for Deviations

- **What tests can be made to verify the product safety?**
- **Does review of the data show the safety of the product is in serious question?**
- **Can this product be diverted for use in another product where safety is assured?**
- **Can the product be reprocessed or reworked in a manner resulting in adequate assurance of safety?**

# Product Held for Deviations

- **What method should be used to discard or destroy the product?**
  - **Send to animal feed?**
  - **Bury in a landfill**
  - **Incinerate the product**
- **What records must be filled out and what HACCP forms should be maintained?**
- **How long should records be kept relating to the production of a particular product?**
  - **Regulatory requirements**
  - **Practical requirements**

# **USDA HACCP Compliance Checklist Form 5000.1**

- **The HACCP plan does not identify the corrective action to be followed in response to a deviation from a critical limit at a CCP (417.2 ( c ) (5)).**

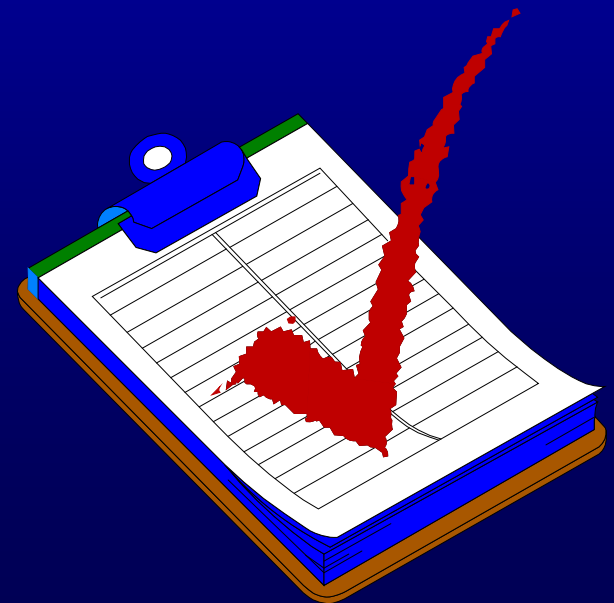


## **417.2 Hazard Analysis and HACCP Plan**

- **(5) Include all corrective actions that have been developed in accordance with 417.3(a) of this part, to be followed in response to any deviation from a critical limit at a CCP;**

# 417.3 Corrective Actions

- (a) .... The HACCP plan shall describe the corrective action to be taken, and assign responsibility for taking corrective action to ensure:



# **417.3 Corrective Actions (cont.)**

- 1) The cause of the deviation is identified and eliminated;**
- 2) The CCP will be under control after the corrective action is taken;**
- 3) Measures to prevent recurrence are established; and**
- 4) No product that is injurious to health or otherwise adulterated as a result of the deviation enters commerce.**

# Basic Compliance/Noncompliance for Corrective Actions

- Could be listed as simply as stating:  
*“We will list the four components of the USDA regulation part 417.3 (a) if a deviation occurs.”*
- Alternatively, you could specifically list the four component statements of the regulation.

# **Basic Compliance/Noncompliance Corrective Actions**

- **USDA indicates you cannot expect specific corrective actions in plans since you cannot identify all possible scenarios.**
- **However, identification of likely deviations is possible.**

# Example Deviation

- **A batch of roast turkey breasts did not reach the critical limit of 158 ° F internal temperature.**
- **Corrective actions could include the following:**

# Example Deviation

- 1) **The cause of the deviation is identified and eliminated;**

**The critical limit was not reached because the oven controller shut down the cooking cycle. The controller had been improperly programmed by the operator.**

# **Example Deviation Corrective Actions**

**2) The CCP will be under control after the corrective action is taken;**

**The controller was checked and the final temperature in the program was incorrect. The controller was programmed with the correct final temperature for the batch.**



# Example Deviation

- 3) **Measures to prevent recurrence are established;**

**Programming of the controller will be conducted by the smokehouse operator and then checked by quality assurance to ensure correct end product temperatures.**

# Example Deviation

- 4) **No product that is injurious to health or otherwise adulterated as a result of the deviation enters commerce.**

**The product cooking times and temperatures will be evaluated by a process authority to determine if desired lethality was achieved by other time and temperature combinations. If lethality was not achieved, the product may be re-cooked to lethality temperatures. If necessary, the product will be properly destroyed or discarded.**

# **417.6 Inadequate HACCP Systems**

- **417.6 Inadequate HACCP Systems.**
  - **A HACCP system may be found to be inadequate if:**
    - **(c.) The establishment fails to take corrective actions, as required by 417.5 of this part;**

# Summary

- **Corrective actions address deviations in critical limits.**
- **Corrective actions should be defined for each CCP**
- **Corrective actions address the process and the product.**
- **Corrective actions need to address the four points addressed in the USDA regulations.**