

The HACCP Written Plan

Once the hazard analysis has identified the Critical Control Points (CCPs) in the production process, the HACCP Written Plan can be developed. As noted previously this requires developing critical limits for each CCP and describing monitoring, deviation, and verification procedures to ensure that food safety standards are met.

Determining Critical Limits for a CCP

Critical limits are defined as criteria which separate acceptability from unacceptability.¹ If the critical limits are not met, it is likely that significant food safety hazards will result unless corrective action is taken. Although critical limits may be set to exceed regulatory requirements, it is vital that they ensure that all government and corporate food safety standards are met.

Example: If the meat display case temperature is determined to be a CCP, the critical limit could be that the display case temperature would not exceed 4°C.

Developing Monitoring Procedures for a CCP

Monitoring is the act of conducting a planned sequence of observations or measurements of control parameters to assess whether a CCP is under control.¹ How often the process will be monitored, who is responsible and the procedures used must be described. Monitoring a CCP allows the operator to determine when critical limits have been, or are likely to be, exceeded.

Example: If the critical limit of the meat display case temperature is determined to be 4°C, the monitoring procedure could be that the display case thermometer is checked three times per day, by the person designated by the supervisor, to ensure that the temperature did not exceed 4°C.

Establishing Deviation Procedures for a CCP

A deviation is defined as failure to meet the specified critical limits.¹ Deviation procedures are pre-determined corrective actions taken both to address the cause of the failure *and* to control any potential food safety hazard which occurred while critical limits were not met.

Example: If the meat display case temperature reached room temperature due to refrigeration failure, the deviation procedure could be to have the supervisor contact maintenance to repair the refrigeration system and to dispose of any perishable product on display when refrigeration failed.

Verification Procedures

Verification activities are methods, procedures and tests that are used to determine if the HACCP plan for that establishment is valid and is operating properly.¹ It is important that the individual(s) doing the verification not be the same individual(s) as those performing monitoring activities. This is to ensure that verification activities are unbiased.

Example: To verify that monitoring for the display case temperature CCP was occurring as intended, monitoring records for the month could be reviewed and a day selected at random another individual could check to see that display case temperatures were as indicated on the monitoring records.

¹ Quoted from the Food and Safety Enhancement Program (FSEP) Manual produced by the Canadian Food Inspection Agency.

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example

A sample HACCP Written Plan for the ground meat and cut production CCPs identified in the hazard analysis is shown below.

GROUND MEAT AND CUT PRODUCTION

Trim Production/Rework Selection – CCP 1B & 3B (*Excessive Microbial Growth*)

Critical Limits	Monitoring Procedures	Deviation Procedures	Verification Procedures	HACCP Records
If the cutting room temperature exceeds 4°C, trim and rework must not be left out for more than 1 hour to prevent excessive microbial growth in ingredients used for ground meat production.	Person designated by supervisor to monitor hourly that that trim is moved to cooler for storage at 4°C. Recorded on <i>Ground Meat and Cut Production HACCP Log 1.</i>	Materials which have not been maintained at appropriate temperatures (since last satisfactory monitoring finding) will not be used for ground meat production. Retraining of employees in trim production performed by supervisor. Corrective Action to be recorded on <i>Ground meat and Cut Production HACCP Log 1.</i>	Supervisor conducts visual inspection once per week and verifies that trim is moved to cooler when as required. Record of verification to be recorded on <i>Ground Meat and Cut Production HACCP Log 1.</i> Supervisor will verify record completion weekly and sign logs.	<i>Ground Meat and Cut Production HACCP Log 1.</i>

Rework Selection – CCP 2B (*Presence of Excessive Levels of Microorganisms*)

Critical Limits	Monitoring Procedures	Deviation Procedures	Verification Procedures	HACCP Records
All cuts selected for rework must have at least one day shelf life remaining. No ground meat from the display case is to be used as rework.	Person designated by supervisor to monitor, when rework materials are selected, that cuts have adequate shelf life remaining and that no ground meat is used as rework. Recorded on <i>Ground Meat and Cut Production HACCP Log 2.</i>	Expired or ground materials will not be used for ground meat production. Retraining of employees in rework selection performed by supervisor. Corrective Action to be recorded on <i>Ground Meat and Cut Production HACCP Log 2.</i>	Supervisor will verify record weekly and sign log. Supervisor conducts visual inspection once per week and verifies that rework is selected as required. Record of verification to be recorded on <i>Ground Meat and Cut Production HACCP Log 2.</i>	<i>Ground Meat and Cut Production HACCP Log 2.</i>

HACCP Records

In order to implement the HACCP Written Plan, records must be created to document the results of monitoring, verification and deviation (corrective action) procedures at each CCP. As HACCP records provide evidence that significant food safety hazards are being controlled, it is important that records be fully completed, accurate, and be submitted on a timely basis. To ensure these criteria are met, the records should be reviewed at the end of each week and signed by an individual who was not involved in monitoring to ensure impartiality. At this time efforts should be made to note any trends which might indicate that critical limits may be exceeded in the future. Documentation should always be completed using pens or other permanent methods, never pencil. Use of corrective liquids and related materials to remove errors is not recommended. If a mistake is made, it should be crossed out and the correct entry made underneath.

It is strongly recommended that records be stored for a period of one year or, at minimum, for a period twice as long as the shelf-life of the products produced under the HACCP plan. The location where records are kept should be known to several individuals so they can be retrieved quickly if required. Appropriate measures should be taken to ensure records are secure and protected from humidity, etc.

In addition to its food safety role, HACCP records, (as well as records from the prerequisite programs), can play a valuable role in maximizing quality of meat products and addressing equipment or supplier issues.

Example HACCP logs for the critical control points indicated on the *Hazard Analysis Form* are shown on the next two pages. HACCP Log 1 documents CCP 1B & 3B which are both related to ensuring that materials being accumulated for ground meat production are placed into storage at 4°C within one hour. HACCP Log 2 serves as a record for CCP 2B which controls selection of rework materials.

HACCP Log 1

The HACCP Log 1 documents CCP 1B & 3B which are both related to ensuring that materials being accumulated for ground meat production are placed into storage at 4°C within one hour.

example

HACCP Log 1

ABC Retail Store - Meat Department			
Ground Meat and Cut Production			
Rework Selection/Trim Production – CCP 1B & 3B (Excessive Levels of Microbial Growth)			
Critical Limits: Materials being accumulated for later use in ground meat production must not be left in the cutting room for more than 1 hour before being moved to cooler for storage at 4°C.			
Date/Time	Rework Materials are moved to cooler within one hour	Shop Trim is moved to cooler within one hour	Initial
<i>Aug 27/03 9:10 am</i>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N.A. <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N.A. <input type="checkbox"/>	<i>JS</i>
<i>10:10 am</i>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N.A. <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N.A. <input type="checkbox"/>	<i>JS</i>
<i>11:10 am</i>	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N.A. <input type="checkbox"/>	<i>JS MA</i>
<i>12:10 pm</i>	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input checked="" type="checkbox"/>	<i>JS</i>
<i>1:10 pm</i>	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input checked="" type="checkbox"/>	<i>JS</i>
<i>2:10 pm</i>	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input checked="" type="checkbox"/>	<i>JS</i>
<i>3:10 pm</i>	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input checked="" type="checkbox"/>	<i>JS</i>
<i>4:10 pm</i>	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input checked="" type="checkbox"/>	<i>JS</i>
<i>5:10 pm</i>	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input checked="" type="checkbox"/>	<i>JS</i>
<i>Closed at 5:30</i>	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input type="checkbox"/>	
	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/> N.A. <input type="checkbox"/>	
Corrective Action Taken (if "Unsatisfactory" is indicated above)			
Completion of Corrective Action Verified by _____ Date _____ <i>signature</i>			

Date *August 27/2003*

Form Completed by *Joe Smith*

Date *Sept 1/2003*

Form Verified by *Mike Andrews*

HACCP Log 2

The HACCP Log 2 serves as a record for CCP 2B which controls selection of rework materials.

example

HACCP Log 2

<i>ABC Retail Store - Meat Department</i>			
Ground Meat and Cut Production			
Rework Selection—CCP 2B (Excessive Levels of Microorganisms)			
Critical Limits: Materials being selected for rework must have at least one day's shelf life remaining. No ground product removed from the display case can be used as rework.			
Date/Time when Rework Selected	All Rework materials have at least one day's shelf life remaining	Ground Product from the display case was not utilized as rework	Initial
<i>Aug 27/03 9:10 AM</i>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<i>JS</i>
	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Describe Corrective Action Taken (if "No" is indicated above) Completion of Corrective Action Verified by _____ Date _____ <i>signature</i>			

Date *August 27/2003*

Form Completed by *Joe Smith*

Date *Sept 1/2003*

Form Verified by *Mike Andrews*

HACCP Plan Training

The final step in developing a HACCP plan is to develop a training program which will ensure that the plan is correctly implemented and understood by all personnel. Records should be kept of training activities and retraining provided on a semi-annual basis or when changes to the operation occur. In most cases the forms used to develop the HACCP Written Plan, as well as the plan itself and associated logs, can be used as training materials. A separate *Standard Operating Procedures Training Form* should be provided to ensure adequate detail is provided in relation to SOPs (see example on next page). In addition to employee training, it is also important that management be adequately informed of the requirements of the food safety system so they understand and approve all required activities.

The table below outlines some potential training methods for the ground meat and cut production HACCP plan.

Group	Suggested Training Activity for Ground Meat and Cut Production
Management	HACCP team leader provides an overview of the development of the plan and highlights actions required to implement the plan. The <i>HACCP Written Plan</i> is approved and signed by management before it is implemented.
All employees involved in ground meat and cut production	HACCP team leader or supervisor reviews <i>Hazard Analysis Form</i> , <i>Process Flow Diagram</i> and <i>Operation Schematic Diagram</i> with all employees and a signed copy of the form is kept on file.
Employees involved in implementing standard operating procedures	HACCP team leader or supervisor reviews <i>Standard Operating Procedures Training Form</i> with applicable employees. A copy signed by employee and trainer is kept on file.
Employees involved in monitoring or verifying CCPs	HACCP team leader or supervisor reviews <i>HACCP Written Plan</i> and <i>HACCP Logs</i> with applicable employees. Employees are shown how to complete logs by on-site demonstration. A copy signed by employee and trainer are kept on file.