UNIT-9 Principle 6: Verification

Learning Outcomes
By the end of this unit the learner will be able to:

Unit 09

Principle 6: Verification

Verification is defined as those activities, other than monitoring, that determine the validity of the HACCP plan and that the system is operating according to the plan. The NAS (1985) pointed out that the major infusion of science in a HACCP system centers on proper identification of the hazards, critical control points, critical limits, and instituting proper verification procedures. These processes should take place during the development and implementation of the HACCP plans and maintenance of the HACCP system. An example of a verification schedule is given in Figure 2.

One aspect of verification is evaluating whether the facility's HACCP system is functioning according to the HACCP plan. An effective HACCP system requires little end-product testing, since sufficient validated safeguards are built in early in the process. Therefore, rather than relying on end-product testing, firms should rely on frequent reviews of their HACCP plan, verification that the HACCP plan is being correctly followed, and review of CCP monitoring and corrective action records.

Another important aspect of verification is the initial validation of the HACCP plan to determine that the plan is scientifically and technically sound, that all hazards have been identified and that if the HACCP plan is properly implemented these hazards will be effectively controlled. Information needed to validate the HACCP plan often include (1) expert advice and scientific studies and (2) in-plant observations, measurements, and evaluations. For example, validation of the cooking process for beef patties should include the scientific justification of the heating times and temperatures needed to obtain an appropriate destruction of pathogenic microorganisms (i.e., enteric pathogens) and studies to confirm that the conditions of cooking will deliver the required time and temperature to each beef patty.

Subsequent validations are performed and documented by a HACCP team or an independent expert as needed. For example, validations are conducted when there is an unexplained system failure; a significant product, process or packaging change occurs; or new hazards are recognized.

In addition, a periodic comprehensive verification of the HACCP system should be conducted by an unbiased, independent authority. Such authorities can be internal or external to the food operation. This should include a technical evaluation of the hazard analysis and each element of the HACCP plan as well as on-site review of all flow diagrams and appropriate records from operation of the plan. A comprehensive verification is independent of other verification procedures and must be performed to ensure that the HACCP plan is resulting in the control of the hazards. If the results of the comprehensive verification identifies deficiencies, the HACCP team modifies the HACCP plan as necessary.

Verification activities are carried out by individuals within a company, third party experts, and regulatory agencies. It is important that individuals doing verification have appropriate technical expertise to perform this function. The role of regulatory and industry in HACCP was further described by the NACMCF (1994) [3].

Examples of verification activities are included as Appendix G.

APPENDIX G

Examples of Verification Activities

A. Verification procedures may include:
   1. Establishment of appropriate verification schedules.
   2. Review of the HACCP plan for completeness.
   3. Confirmation of the accuracy of the flow diagram.
   4. Review of the HACCP system to determine if the facility is operating according to the HACCP plan.
   5. Review of CCP monitoring records.
   6. Review of records for deviations and corrective actions.
   7. Validation of critical limits to confirm that they are adequate to control significant hazards.
   8. Validation of HACCP plan, including on-site review.
   9. Review of modifications of the HACCP plan.
   10. Sampling and testing to verify CCPs.

B. Verification should be conducted:
   1. Routinely, or on an unannounced basis, to assure CCPs are under control.
   2. When there are emerging concerns about the safety of the product.
   3. When foods have been implicated as a vehicle of foodborne disease.
   4. To confirm that changes have been implemented correctly after a HACCP plan has been modified.
   5. To assess whether a HACCP plan should be modified due to a change in the process, equipment, ingredients, etc.

C. Verification reports may include information on the presence and adequacy of.
   1. The HACCP plan and the person(s) responsible for administering and updating the HACCP plan.
   2. The records associated with CCP monitoring.
   3. Direct recording of monitoring data of the CCP while in operation.
   4. Certification that monitoring equipment is properly calibrated and in working order.
   5. Corrective actions for deviations.
   6. Sampling and testing methods used to verify that CCPs are under control.
   7. Modifications to the HACCP plan.
   8. Training and knowledge of individuals responsible for monitoring CCPs.
   9. Validation activities.

Figure 2. Example of a Company Established HACCP Verification Schedule

Activity	Frequency	Responsibility	Reviewer
Verification Activities Scheduling	Yearly or Upon HACCP System Change	HACCP Coordinator	Plant Manager
Initial Validation of HACCP Plan	Prior to and During Initial Implementation of Plan	Independent Expert(s)[(a)]	HACCP Team
Subsequent validation of HACCP Plan	When Critical Limits Changed, Significant Changes in Process, Equipment Changed, After System Failure, etc.	Independent Expert(s)[(a)]	HACCP Team
Verification of CCP Monitoring as Described in the Plan (e.g., monitoring of patty cooking temperature)	According to HACCP Plan (e.g., once per shift)	According to HACCP Plan (e.g., Line Supervisor)	According to HACCP Plan (e.g., Quality Control)
Review of Monitoring, Corrective Action Records to Show Compliance with the Plan	Monthly	Quality Assurance	HACCP Team
Comprehensive HACCP System Verification	Yearly	Independent Expert(s)[(a)]	Plant Manager

[(a)] Done by others than the team writing and implementing the plan. May require additional technical expertise as well as laboratory and plant test studies.

Further Reading: