Food Safety/Sanitation Distance Learning Course

Learning Objectives

Sanitation
• Maintain the sanitary condition of food-contact surfaces and the facility environment through cleaning and sanitizing functions
• Track required and completed cleaning activities using cleaning schedules
• Sort cleaning activities into groups appropriate for periodic or daily cleaning schedules
• Assign frequencies to cleaning tasks based on run-time, usage, seasonal changes, and other factors
• Write detailed cleaning procedures that ensure cleaning tasks are consistent from person to person
• Remove soil using established cleaning methods
• Select cleaning compounds based on established criteria
• Select the appropriate type of sanitizer to use for a given activity
• Select the appropriate type of cleaning method to use for a given activity
• Inspect completed cleaning activities using established inspection criteria to determine if product residue was effectively removed
• Swab equipment surfaces to evaluate the effectiveness of completed cleaning activities

Personnel Practices
• Follow regulatory guidelines and use a risk assessment to determine appropriate personnel practices
• Take measures to prevent foodborne illnesses from being transmitted from personnel to food products and product-contact surfaces
• Wash and sanitize hands to remove residue and organisms prior to handling food product or product-contact surfaces using an appropriate method and frequency
• Protect gloves used for employee protection and product protection from becoming contaminated
• Select uniforms and outer garments that factor in food safety
• Establish employee responsibilities regarding uniforms and outer garments
• Wear hair restraints to effectively cover exposed hair on the head and face
• Establish jewelry policy restrictions so that items do not lead to potential product contamination issues
• Establish a cosmetics policy so that they do not become a source of product or product-contact surface contamination
• Designate eating areas and tobacco usage areas in the facility so that personal food and tobacco items do not contaminate product or product-contact surfaces
• Store personal items in designated areas away from product storage and processing

Body Fluids
• Establish a body fluids response program
• Assemble a body fluids cleanup kit
• Respond to a body fluids spill
• Identify quarantine areas affected by a body fluids incident
• Determine disposition of product and equipment after a body fluids spill
• Document response to a body fluids spill
Allergens
- Given an ingredient statement, determine which ingredients are allergens or have allergen components
- Incorporate specific allergens recognized by the designation country your company exports to in the allergen control program
- Identify foods included in the Big 8 Allergen groups by their common and specific names
- Evaluate raw materials for the presence of allergens during the purchasing process
- Identify allergens in products supplied to you and allergen cross-contact risks at your suppliers’ plants
- Compare documentation from received materials to approved specifications and review for accuracy
- Store raw materials and finished products using practices that will prevent allergen cross-contact
- Review formulas to identify allergens present and use that information for scheduling and label or ingredient statement confirmation
- Control rework to ensure that no undeclared allergens are introduced into products that do not declare them
- Reduce the risk of allergen cross-contact by scheduling production appropriately
- Use dedicated utensils and containers and personnel practices when handling allergens to prevent cross-contact
- Verify the accuracy of ingredient statements at the time of packaging or label development to confirm that the correct package or label is being applied at the time of packing
- Clean equipment to remove allergen proteins and use methods to validate that the cleaning was effective

Transport and Storage
- Establish ongoing communication between suppliers, carriers, and customers to promote safe shipping and storage practices
- Verify transport documentation against driver credentials, seals, and physical conditions of the vehicle
- Perform a physical inspection of transport vehicles
- Evaluate critical documentation necessary for shipping and receiving
- Handle hoses during the unloading process in a way that will not introduce contaminants to the product
- Monitor temperature-sensitive products during transport and storage to ensure temperature parameters are not breached
- Provide adequate spacing in storage areas to prevent damage, improve efficiencies, and comply with the GMPs
- Segregate food products from nonfood items and in a way that prevents allergen cross-contamination
- Rotate stored materials using an inventory method that promotes food safety and quality

Integrated Pest Management
- Solve pest issues using the ICE principle
- Use prerequisite programs to control or change the environment supporting a pest population
- Place monitoring devices in locations that are appropriate for the targeted pest and food plant environment
- Collect data from monitoring devices and use it to establish pest trends
- Recognize signs of pest activity and be able to use resources to identify specific pests
- Provide oversight to contracted pest management services
Maintenance

- Explain how preventive maintenance impacts a food facility’s overall food safety level
- Select approved repair materials for short-term, temporary repairs
- Take measures to prevent work activities and tools used during repairs from creating cross-contamination concerns
- Prioritize maintenance tasks
- Identify food-contact surfaces and product zones in a given area of the facility
- Apply design standards for equipment purchases or repair
- Select appropriate types of lubricants based on intended application
- Develop work instructions for maintenance tasks to prevent contamination
- Explain types of documentation necessary for the maintenance program

Sanitary Design

- Prevent sanitary design issues from contributing to sanitation difficulties, pest infestations, airborne contamination, drainage issues, and other food safety concerns
- Plan building improvement and construction projects in a way that addresses potential contamination issues related to cleaning and maintenance challenges
- Isolate products that are susceptible to microbiological or allergen issues from raw and untreated materials or those containing allergens
- Select appropriate wall and floor surfaces for the type of activity that takes place in each area of the facility
- Use doors as a barrier between production areas and external areas, to direct equipment, people, and product traffic patterns, and to keep pests out of the building
- Maintain an 18-inch perimeter between the wall and any stored product or raw material to allow for inspections, cleaning, and maintenance of pest monitoring devices
- Choose food-contact surfaces, including equipment and utensils, that are durable, easily cleanable, non-absorbent, and non-toxic
- Install and maintain equipment in a way that facilitates cleaning, maintenance, and inspection activities
- Monitor the condition of equipment through self-inspections
- Collaborate with representatives from sanitation, quality, maintenance, the HACCP team, and production to understand how equipment changes will affect the entire production process
- Evaluate new equipment or equipment modifications for design flaws that would inhibit good sanitary practices

Chemical Control

- Select appropriate controlled storage methods for all non-ingredient chemicals identified at your facility
- Segregate chemicals from non-compatible chemicals and other materials
- Separate chemical categories (maintenance, sanitation, and pest control) to prevent cross-contamination of food-contact surfaces
- Use a chemical log to document all chemicals at the facility, along with associated information for each chemical
- Maintain a chemical inventory at each chemical storage location
- Retrieve and follow important storage, usage, application, handling, and disposal information from a chemical label and Safety Data Sheet
- Control secondary chemical containers to prevent product contamination
- Approve any chemicals brought on-site for the intended application using a chemical approval process
- Use contractor control measures to prevent pest control and maintenance chemicals brought on-site from contaminating products
Air and Water Quality
- Identify means by which air and water can introduce microbiological, physical, and chemical contaminants
- Properly screen ambient air to prevent the inclusion of physical foreign materials and filter to prevent dust, odors, chemical, or microbiological concerns
- Check airflow for negative or positive pressure
- Conduct air sampling and testing to measure the effectiveness of filtration and ventilation
- Select air drying and filtering methods to remove oil, water, and other solids from compressed air
- Use an approved water source that is tested to ensure that federal and local drinking water standards are met
- Test water from various point-of-use locations within the plant to check for microbiological contamination
- Use backflow preventers at appropriate locations to prevent backsiphonage and back pressure and establish a testing frequency for backflow preventers
- Monitor wastewater and sewage disposal routes to ensure that they do not become sources of contamination

Operational Methods
- Handle and store materials (products, utensils, packaging) in a way that prevents introduction of a food safety concern
- Review labels at receipt to ensure they are in agreement with the original specification (or graphic approval)
- Conduct and document label verification at appropriate process steps
- Follow “like-into-like” practices during rework activities so that no undeclared ingredients are introduced
- Establish color-coding or another identification system for containers, scoops, and utensils
- Establish procedures for moving ingredients, work-in-progress, and finished goods throughout a food plant to avoid contamination
- Inspect utensils, packaging, and tools to ensure that no visible contamination has occurred and that they are in good repair

Physical Foreign Material Control
- Identify sources of physical foreign material
- Categorize physical foreign materials as food safety hazards or quality issues
- Visually inspect shipping/receiving vehicles to evaluate ingredients and raw materials for evidence of contamination
- Follow a statistical sampling plan for ingredients and raw materials to monitor for physical foreign materials
- Inventory all essential glass, brittle plastics, and ceramics (GBPC) at the facility and eliminate all non-essential GBPC
- Protect and inspect any essential GBPC at the facility
- Follow procedures for cleaning up GBPC breakage
- Identify and monitor metal-to-metal wear points in equipment design where product contamination is possible or likely
- Use a control program to eliminate wood in the food plant and control and manage essential wood materials. Manage appropriate control devices to monitor and control potential sources of physical foreign material
- Explain how employees can monitor for potential physical foreign materials
Traceability
- Identify a lot in the supply chain and pass information about the identified product, supplier, location, etc. to the relevant member in the supply chain
- Assign a unique identifier number for each lot of food material or product and record and document the number
- Track and trace a food product through your entire operation
- Maintain an accurate storage inventory
- Use stock rotation methods and clean breaks to track materials in storage
- Record quantities and lot codes for each run, batch, or other plant-defined unit of production for raw materials being used
- Account for comingling of bulk products and rework usage
- Assign a unique finished product code that is linked to the raw material lot numbers to trace the product’s future path
- Provide documented evidence of the link between batches, suppliers, and first external point of distribution
  Complete forward and backward trace exercises to validate the traceability program and identify where improvements can be made

Recall
- Select recall team members who would be best for each identified recall activity
- Categorize recall scenarios based on regulatory classifications
- Evaluate situations to determine if a recall or another action is warranted
- Conduct a recall exercise to test the plant’s ability to identify and remove suspect product from the market
- Draft notifications for regulatory agencies, media, and customers
- Communicate recall events to customers, regulatory authorities, and media in a timely and efficient manner
- Maintain records from the time of receipt to the first point of distribution to locate suspect product during a recall exercise or event
- Identify weakness in the recall program prior to an actual event

Food Defense
- Follow food defense regulatory guidelines imposed by federal, state, and local governments
- Develop a recall program that includes recalls due to intentionally introduced contaminants
- Submit prior notice for any shipments of food imported into the United States
- Put together a well-rounded food defense team
- Complete a vulnerability assessment to identify strengths and weaknesses of the food defense program
- Use results from the vulnerability assessment to improve physical security measures and procedural security measures
- Implement a food defense plan to help manage the program and protect critical assets
- Test the food defense program periodically to evaluate its effectiveness

Microbial Control
- Differentiate between intrinsic factors and extrinsic factors that support microbial growth
- Mitigate microbial risks by inspecting incoming raw materials and verifying suppliers’ certificates of analysis (COA)
- Apply processes to inhibit pathogenic microorganisms in a product
- Use risk analysis to identify the types of microorganisms that are a concern
- Sample products in a way that does not compromise the product or sample
- Secure on-site labs where microbiological testing takes place
Environmental Monitoring
• Use the zoning concept to identify sampling points
• Determine which organisms to test for in an environmental monitoring program
• Select correct indicator organisms for use in testing
• Interpret results of environmental monitoring to identify risk to product safety
• Respond to environmental monitoring results that exceed established limits
• Select appropriate sampling methods and tools that can be used for environmental monitoring
• Follow hygienic procedures while collecting environmental samples
• Establish a baseline or target level using historical data
• Compare sampling results against the target level or baseline
• Map the locations of negative results, increasing trends, and positive samples to identify harborage niches and hot spots

Customer Complaints
• Use customer feedback to improve your company’s performance
• Determine which customer complaint issues could pose harm to consumers
• Categorize complaints as quality or food safety issues
• Investigate customer complaints to identify the root cause and determine what program failure allowed the issue to occur
• Assign corrective action to deal with the immediate situation and preventive action to prevent similar issues from recurring
• Find commonalities among complaints (trend analysis) to show a common root cause among issues and identify whether or not preventive actions have been effective
• Review customer complaints and make adjustments to associated programs to address the issue

Quality Control
• Differentiate between quality assurance and quality control
• Identify documentation that is pertinent to supplier approval
• Monitor and verify suppliers and their associated materials to ensure they conform to expectations
• Identify key controls for formulas and associated batch sheets/work orders/computer controls
• Monitor process settings and process outputs to ensure compliance to process specifications
• Identify non-conforming product and establish hold mechanisms
• Determine disposition criteria for non-conforming product

Regulatory Overview
• Manage regulatory inspections in a manner that best protects your company
• Prepare site personnel for a regulatory inspection
• Respond to findings during a regulatory inspection
• Establish procedures for handling requests by regulators for records access
• Split samples with regulators
HACCP
• Describe a food product by identifying the type of product, the type of processing involved, and the technical information
• Use information about the intended consumer and the intended use of the product to understand risk and control hazards
• Construct a process flow diagram that depicts all process steps from the time of receipt of raw materials to the final shipping step of the finished product
• Take a process flow diagram into the facility and follow the actual flow to verify that every step on the diagram is truly taking place in the plant and that all processes are represented
• Contribute to a hazard analysis of raw materials and process steps to identify food safety hazards and control measures
• Use criteria to determine if identified hazard control measures are critical control points (CCPs)
• Establish critical limits for each CCP that define whether the identified hazard is controlled or reduced to an acceptable level
• Establish monitoring procedures for identified CCPs
• Respond to critical limits that have not been met with corrective action
• Confirm that the monitoring and corrective actions are conducted in accordance with the HACCP plan
• Maintain HACCP documentation and records

Self-Inspections and Internal Audits
• Describe the difference between inspections and audits
• Conduct self-inspections
• Conduct audits
• Differentiate between pre-operational, post-operational, and monthly inspections
• Determine when an assessment is appropriate