IFSS Framework – Basic Level Gen Eds

B26 Sanitation Practices

Definition: Introductory knowledge, skills, and abilities related to cleaning, sanitizing, and disinfecting, and the importance of facility and equipment sanitary design.

Topic Area TLO (Terminal Learning Objective)**:** Describe the importance of sanitary design and practices.

Topic Area ELOs (Enabling Learning Objective)**:**

- Discuss the principles of sanitary design and practices.
- Identify the appropriate use of cleaners, sanitizers, and disinfectants.
- Describe the use of cleaners and sanitizers in specific situations.
- Explain regulatory agency policies in regard to sanitation, design, and employee practices.
- Explain the use of cleaning and sanitizing to control adulterants.

Unit 1: Foundations	**TLO Behavioral Anchors - not all-inclusive**
Definition: Sanitation practices and sanitary design of facilities and equipment. **TLO:** Discuss sanitation practices and sanitary design of facilities and equipment. **ELOs:** • Discuss sanitary design of facilities and equipment. • Discuss the importance of GMPs, GRPs, and GAPs. • Describe principles of sanitation. • Describe the purpose of SSOPs. • Describe the importance of employee sanitation training. • Give examples of monitoring records. • Discuss water chemistry.	• The regulator can identify three facility sanitary design principles: a. Exterior and upstream considerations b. Piping c. Facility plan review d. Airflow e. Clean ability f. No niches/harborages areas g. Facility design meets the needs of the food sector h. Traffic patterns i. Process flow considerations j. Food contact surfaces made of food compatible materials (Food Code 4-101.11) k. Vermin control l. Water source and quality • The regulator can identify an equipment sanitary design principle: a. UL b. Cleanable to a microbiological level c. NSF International d. Facility plan review e. Cleanability f. No niches/harborage areas g. 3-A Sanitation Standards, Inc. h. Self-draining i. Accessible for inspection and maintenance • The regulator can discuss a biological hazard related to sanitary design: a. Minimize bacterial growth

	b. Transportation as a hazard c. Biohazards d. Sanitation provides a five (5) log reduction e. Validation of cleaning and sanitizing protocols f. Environmental hazards • The regulator can identify cleaning and sanitizing protocols: a. Allergen control b. Food safety plan c. Sanitation Standards of Operation (SSOPs) d. Employee training e. Sanitary operational performance f. Cleaning vs sanitizing g. SOPs describe how sanitation is conducted h. Management oversight i. Current Good Manufacturing Practices (cGMP), current Good Retail Practices (cGRP), current Good Agriculture Practices (cGAP) j. Cross-contamination prevention k. Monitoring records l. Biofilms m. Types of sanitizers n. Labels o. Hot water p. Follow label instructions q. Heat • The regulator can explain how clean ability impacts sanitization. • The regulator can describe how sanitary design, adequate cleaning and sanitizing lead to hazard reduction.
Unit 2: Cleaning **Definition:** The process of removing visible material such as soil, dirt, and organic matter from facilities and equipment.	**TLO Behavioral Anchors - not all-inclusive** a. The regulator can describe two different types of cleaning: a. Cleaning vs sanitizing b. High pressure washing c. Dustless cleaning methods

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TLO: Discuss the process of removing visible material such as soil, dirt, and organic matter from facilities and equipment. **ELOs:** • Describe the factors that affect the efficacy of cleaning agents. • Explain how water chemistry can affect cleaning agents. • Discuss types of cleaning agents and their function on soil. • Describe cleaning methods. • Explain the importance of following the manufacturer's directions for use. • Explain the importance of breaking down equipment for cleaning.	d. Dry clean e. Flushing (dry feed) f. Rinsing (wet) g. Wet clean h. Clean-in-Place (CIP) i. Clean-out-of-Place (COP) j. Equipment teardown • The regulator can discuss two concerns with cleaning supply usage: • Types of detergents/soaps • Contact time • Concentration strengths • Appropriate cleaning supplies • Matching cleaners with intended use • Follow label instructions • Cleaning solution labeling • Material Safety Data Sheets (MSD) • Cleaning frequencies • Proper storage of chemicals • The regulator can provide two examples of appropriate cleaning methods. • The regulator can discuss four concerns with cleaning supply usage.
Unit 3: Sanitizing	**TLO Behavioral Anchors - not all-inclusive**
Definition: Reducing the presence of microorganisms. **TLO:** Discuss the process of reducing the presence of microorganisms. **ELOs:** • Explain the importance of using approved food-grade sanitizers. • Describe the factors that affect the efficacy of sanitizers. • Describe the types of	• The regulator can list two considerations for microorganism control: a. Prescribed treatment matches threat b. Environmental hazards c. Importance of cleaning before sanitizing d. Pathogens of concern e. Cross contamination (sanitizer residue, overspray, etc.) • The regulator can describe the concept of how sanitizers work for microorganism control: a. Types of sanitizers b. Label instructions c. Parts per million (PPM) d. Sanitizer concentrations e. Methods, chemical, and hot water f. Contact time g. Test strips h. Temperature effects on efficacy i. Drying

sanitizing agents. • Discuss the purpose of sanitizers. • Discuss sanitizers' requirements for use. • Describe sanitizing strategies. • Identify sanitizer test methods.	• The regulator can describe three considerations for microorganism control. • The regulator can describe proper use of two sanitizers for microorganism control.

Unit 4: Disinfecting	**TLO Behavioral Anchors - not all-inclusive**
Definition: The use of specialized techniques to destroy or irreversibly inactivate pathogenic microorganisms but not necessarily their spores. **TLO:** Discuss the use of specialized techniques to destroy or irreversibly inactivate pathogenic microorganisms but not necessarily their spores. **ELOs:** • Explain the importance of using approved food-grade disinfectants. • Describe the factors that affect the efficacy of disinfectants. • Discuss the purpose of disinfectants. • Discuss disinfectants' requirements for use. • Describe disinfecting strategies. • Identify disinfectant test methods.	• The regulator can identify a specialized technique for disinfection: a. Oxidation b. Ozone c. Ultra violet (UV) d. Time/temperature/concentration e. Potential of hydrogen (pH) control f. Irradiation g. Membrane technologies h. Onsite disinfection generation • The regulator can distinguish between sanitizing and disinfecting. • The regulator can discuss a specialized technique for disinfection.

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Unit 5: Sanitary Engineering	**TLO Behavioral Anchors - not all-inclusive**
Definition: The design and construction of facilities and equipment to reduce of prevent Contamination and facilitate cleaning and sanitizing. **TLO:** Discuss how facility and equipment design impacts sanitation. **ELOs:** • Discuss the concept of building envelope. • Discuss the importance of proper equipment layout.	• The regulator can discuss three equipment design considerations: a. Appropriate materials b. Smooth, non-absorbent, easily cleanable construction c. UL or NSF International certified d. Non-corrosive and durable e. Self-draining f. Biofilms g. Non-toxic materials h. No niches i. Accessibility • The regulator can describe three sanitary design principles: a. Appropriate wastewater disposal b. Biohazard areas c. Allergen control d. Employee movement e. Refuse storage/removal f. Loading dock design and maintenance g. Clean rooms h. Water source i. Water quality j. Upstream considerations k. Emerging pathogens of concern on building design l. Hygienic compatibility m. Facility flow, incoming to finished product n. Exterior considerations o. Airflow systems p. Condensation q. Negative airflow vs positive r. Pest control s. Hygienic design of maintenance enclosures t. Plumbing design and installation • The regulator can discuss six equipment design considerations. • The regulator can describe six sanitary design principles.
Unit 6: Sources and Routes of Contamination	**TLO Behavioral Anchors - not all-inclusive**
Definition: Hazards, practices, and facility/equipment design that may lead to contamination.	• The regulator can list two improper activities that may lead to contamination: a. Splash may transfer pathogens (droplet or airborne)

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TLO: Discuss hazards, practices, and facility/equipment design that may lead to contamination. **ELOs:** • Discuss potential hazards. • Explain routes of contamination. • Describe how people can be a source of contamination. • Describe how cleaning practices can contribute to contamination. • Explain the importance of vector control. • Discuss the water source.	b. Cross contamination c. Allergen cross contact d. Improper cleaning, sanitizing, and disinfecting e. Employee hygiene • The regulator can list facility/equipment design attributes that may lead to contamination: a. Improper design of facilities and equipment b. Improper maintenance of facilities and equipment c. Hidden niches d. Airborne contaminants e. Vector control f. Water management (standing water, drains) • The regulator can identify three types of hazards: a. Chemical, Physical, Microbial hazards • The regulator can explain how improper activities lead to contamination. • The regulator can explain how improper design of facility/equipment and maintenance may lead to contamination.