A comprehensive uniform program and personnel training can reduce the incidence of food contamination in food plants.

The recent white paper concerning the modernization of the GMPs addresses prevention of many contamination issues and emphasizes the control and training of operators working in manufacturing, packaging, or storage of human food. One recommendation made is that, “No street clothing should be allowed unless protective outer garments are worn”.

The challenges of food safety and security and the impact of revised cGMPs in the food processing industry are evolving and, because of this, constant quality assurance is required. This begins with having confidence in the garments and apparel service that supports food processing operations.

The food processing industry is acutely aware of the many possible sources of contamination that threaten manufacturing, packaging and/or filling operations. The most significant threat is also the threat that is easiest to control – employees working in the facility. HACCP “risk management” practices address all aspects of the operation including personnel.

One of the most significant methods for reducing human contamination in the food industry is through a complete uniform program and personnel training. A comprehensive uniform program is designed to provide:

- Contamination control
- Security
- Safety

**CONTAMINATION CONTROL** Food processing apparel is designed to capture particles shed from the human body and prevent these contaminants from being dispersed into the product or into the work environment. Such apparel protects from numerous contaminants that are generated from the human body, including:

- Viable particles such as bacteria and yeasts.
- Non-viable particles such as hair, dead skin cells and dandruff.
- Elements such as sodium, potassium, chloride and magnesium from sweat and saliva.
It is important to note that because the human body produces these contaminants in such large quantities, apparel must be worn and processed correctly. Additionally, dedicated food processing apparel protects the product and the process from contamination brought into the plant on employees’ street clothes.

When choosing a uniform provider, one should consider the importance of that provider’s ability to safeguard the food processing garments from cross-contamination from within the operation and from other customers, to maintain a constant level of aesthetic, microbial, and particulate cleanliness, and to deliver uniforms in a timely and efficient manner. Uniform providers should follow a linear process of precision cleaning that includes the following steps:

**Step 1**
Clean garments are delivered and soiled garments are retrieved from a customer facility by a highly reliable service sales representative dedicated to servicing this customer. All soiled food processing garments are segregated before they are returned to the laundry, thereby reducing the potential cross-contamination with other soiled garments. The soiled garments are directly transported from the customer site to the receiving area of the laundry.

**Step 2**
From receiving, garments are transported to the soil/sort area, where they are sorted by the customer and staged for laundering. Every load is weighed to assure the correct proportion of garments, wash chemical, and water mixture.

**Step 3**
A validated wash process that is specially formulated to address decontamination, soil, and microbial removal from food processing garments should be followed. The washer is pre-programmed with a computer controlled, ladder-logic wash formula that is interlinked with the computer controlled wash chemical injection system and uses only fresh, processed water in all rinses and flushes.

**Step 4**
Garments are removed from the washer and immediately loaded in dryers. The computer controlled drying process inhibits microbial bioburden by removing the moisture required for microbial replication. Additionally, garments never sit in washers or in a damp environment for an extended period of time, therefore eliminating potential for mildew.

**Step 5**
From dryers, garments are transported to the final sort area, where they are sorted, inspected, processed through a steam tunnel for final sanitization, and packaged. A 100% inspection of all garments is performed. Garments are segregated for repair or replacement, if necessary. Experienced operators using advanced garment repair technology control garment integrity. Bar coding and computerized inventory control provide garment history and efficient apparel management. Accurate customer-use records are generated for verification at delivery.

**Step 6**
Garments are ready for delivery to the customer. The linear process flow of production with line clearance between batches delineates clear segregation of cleaned versus soiled garments.

**Step 7**
A comprehensive HACCP program and sanitation standard operating procedures assure that:
- Preventive and corrective maintenance is current on all equipment.
- Personnel are trained and competent in their job discipline.
- Wash chemicals and water quality meets specifications.
- The laundry facility is pest free and clean at all times to protect cleaned garments.

**Step 8**
The professionally trained service sales representative delivers cleaned garments and associated documentation to the customer.

**SAFETY.** To assure continuity of service at all times, the uniform provider should have a Disaster Prevention/Response/Recovery Plan that addresses the safety and security of personnel and property, internal and external equipment redundancy, procedures and policies and back-up facilities in various disaster scenarios.

**SECURITY.** The provider should provide a variety of types and colors of garment segregate operations, thus controlling potential cross contamination of product and easily identifying employees performing specialized operations.

**ENVIRONMENTAL MONITORING.** FSIS “Microbial Sampling of RTE Products for the FSIS Verification Testing Program mandates environmental sampling, including outer garments for workers, for the presence of bacterial pathogens.” A comprehensive garment program includes personnel certification that performs environmental sampling before and after working in the production process. Additional environmental sampling should be performed before and after sanitization of production surfaces.

**AUDITS FOR COMPLIANCE.** Routine internal and external customer audits assure compliance to the customer’s specifications, the established HACCP program, and SSOPs.

**A BALANCED APPAREL PROGRAM.** A balanced apparel program for the food processing industry is a single source that specializes in apparel service, entrance mats, anti-fatigue mats, sanitary soaps and supplies, first aid kits, and safety supplies.

**ABOUT CINTAS.** Cintas Corporation provides specialized services to various businesses in North America, including the food processing industry. For more information, call 1-800-CINTAS1. AIB

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