Food Safety for Packaging Manufacturers

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  - Consumer Goods Forum (GFSI)
  - Centers for Disease Control and Prevention
  - World Health Organization
  - 22000-tools.com
  - FDA.gov
The following information is for reference only – it does not necessarily constitute a complete list of requirements to become certified under any GFSI recognized food safety scheme.
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Food Safety

Background
Why is Food Safety important?
Foodborne Illness Estimates

United States*
- 48 million cases
- 120,000 hospitalizations
- 3000 deaths

Canada**
- 4 million cases

EU**
- 45.5 million cases

China/Asia**
- Surveillance beginning

Australia**
- 5.4 million cases
- 120 deaths

Global food & water illness estimates: 1 billion cases, 2.2 million deaths**

*Based on 2011 estimates, CDC
** Based on WHO estimates
Food Safety Outbreak Visibility

- **1993**
  - QSR Burgers
- **1994**
  - Ice Cream
- **1995**
  - QSR Burgers
  - Unpast. Juice
- **1996**
  - Cereal
- **1997**
  - Ground Beef
  - Eggs, Chicken, Beef, Pork
- **1998**
  - Unpast. Juice
- **1999**
  - Ground Beef (2)
  - RTE Turkey & Chicken
- **2000**
  - Steak House
- **2002**
  - Bagged Spinach, Restaurant Lettuce
- **2003**
  - Green Onions
- **2005**
  - Bagged Lettuce
- **2006**
  - Bagged Spinach, Restaurant Lettuce
  - Lunch Meat
- **2008**
  - Peppers, Tomatoes, Cereal
  - Milk, Pork
  - Lunch Meats
- **2009**
  - Cookie Dough
  - Milk Powder, Peanut Butter, Pistachios
- **2010**
  - Peppers, HVP, Shell Eggs, Sprouts (2), Chicken Casserole, Raw Milk
  - Ground Beef, Raw Tuna, Mangoes, Cantaloupe, Peanut Butter
- **2011**
  - Sprouts, Ground Turkey, Cantaloupe
  - Cantaloupe
- **2012**
  - Spinach, Mixed Greens
  - Ground Beef, Raw Tuna, Mangoes, Cantaloupe, Peanut Butter
  - Ricotta Cheese
Age Makes A Difference!

2011 US FOODBORNE ESTIMATES

Food Allergens

Food safety issue for sensitive population

- Eggs
- Milk
- Soy
- Wheat
- Peanuts
- Tree nuts
- Crustaceans
- Fish

Cleaning is essential!
FDA Food Recalls - 2010

Adapted from: FDA 2010 Recalls, Market Withdrawals and Safety Alerts
Food Safety Modernization Act (FSMA)

- In January 2011, the FDA Food Safety Modernization Act was signed into law
- This new legislation is intended to enhance public health and food safety by:
  - Requiring all food companies to develop a food safety plan
  - Adopting a risk-based approach to inspection
  - Improving the safety of imported food and ingredients
- Main elements of the law include:
  - New responsibilities for food companies
  - New controls over imported food
  - New powers for FDA
  - New fees on food companies and importers
FSMA: Risk Based Preventive Controls for Food

- Requires written food safety plan, developed by a “qualified individual” for food processors
- Plan must include a comprehensive hazard analysis
  - Address microbiological, physical, chemical and radiologic hazards
- Requires Preventive Controls
  - Defined critical limits, written monitoring procedures, documented corrective actions, verification activities and record keeping
- All foreign facilities importing food to the U.S. will be subject to the same requirements as U.S.-based facilities
- cGMP regulations will be revised/updated
FSMA Rule: Accreditation of Third Party Auditors

- Establishes a program for certification bodies
  - To conduct food safety audits
  - Issue certifications of foreign facilities and the foods they produce

- FDA’s use of certifications
  - Determine whether to admit certain imports into the US, especially those that pose high food safety risk
  - Determine if an auditor is qualified to participate in program for expedited entry of food
**FSMA**

- Requires food manufacturers to have a food safety plan
- In turn, food manufacturers are asking their packaging and ingredient suppliers to develop food safety plans
- Most companies choose to adhere to a recognized standard for food safety certification
Food Safety Organization

Governance and Standards
Food Safety certification before 2000

- Major retailers had individual audit requirements for food manufacturers and suppliers
- Multiple audits were needed – for each retailer, annually
- Requirements differed by retailer
- Some regional standards were available but not accepted by customers
Global Food Safety Initiative (GFSI)

- Primary goal – to ensure the food supply chain is safe for consumers
  - developed in 2000 by international retailers – recognized need
  - Not for profit
- Sets requirements for food safety “schemes”
- Certifies the certification bodies by scheme
- Ensures separate management of Food Safety Scheme owners and Accredited Certification Bodies
- Works to standardize the schemes for universal acceptance (benchmarking)
Food Safety “Scheme”

Terminology used to describe a commercial food safety program that includes an auditable and certifiable food safety standard and a governance and food management system.
GFSI Recognized Schemes

- benchmarked (recognized) by food category (scope)
  - *Direct food contact packaging* is a separate category

- GFSI is in the process of evaluating and *benchmarking* major schemes for each category, to establish equivalence and standardization

- Objective is to reduce the number of audits needed to have a safe manufacturing process regardless of number and type of customers

- Theoretically, food retailers and food suppliers should accept any GFSI recognized scheme certification for a given category
Examples of benchmarked schemes

- BRC – British Retail Consortium
  - Common in Europe

- SQF – Safe Quality Food
  - Based on ISO standards

- FSSC 22000 – Food Safety System Certification
  - Based on ISO standard 22000 plus additional standards for prerequisite

- IFS – International Food Safety
  - Common in Europe
GFSI Benchmark Schemes for Packaging Manufacturers

- SQF Level 2
  - Module 2 (Main standard) + Module 13 (Food Packaging)
- BRC Global Standard for Food Safety
  - Main standard + global food packaging standard
- FSSC
  - ISO 22000 plus PAS 223 (Food Packaging)
  - ISO based, can combine audits
- IFS PacSecure
  - Recently approved, QC and packaging in one
  - Developed by packaging manufacturers
  - Allows additional time for some corrective actions

- OTHER (non-benchmarked)
Third Party Certification Bodies

- Example third party certification bodies (For profit):
  - AIB, NSF, SAI Global, LRQA, others
- Not all certification bodies are certified for all schemes
- GFSI provides guidance for auditing
- Auditing is benchmarked by GFSI
GFSI Recognized Schemes

- All based on *Codex Alimentarius* (Europe) and cGMP principles (US) – prerequisite programs
- All require HACCP analysis
- All require a food safety management system
- All require legal compliance in addition to above
- Most schemes includes a main standard and a supplementary standard specific to the category
GFSI
- Benchmark standards
- Benchmark Certification Bodies

Standards Organizations
(FSSC, BRC, SQF, IFS, ISO)

Third Party Certification Bodies
(NSF, LRQA, AIB, etc)

Packaging Manufacturers
Food Safety Certification

Elements
Food Safety

Food Safety Management Program

Prerequisite Program

HACCP plan
Prerequisite Programs

- General cleanliness and structural integrity of the manufacturing facility, equipment and personnel
- Minimize risk of contamination
- Typically referred to in the US as “GMPs” or “cGMPs”
- Robust prerequisite programs need to be in place for food safety certification
- Tie into HACCP and Food Safety Management
Example Prerequisite Requirements (Packaging)

- Personal hygiene
- PPEs
- Establishment – external
- Layout and workspace – internal
- Utilities
- Waste management
- Equipment suitability and maintenance
- Purchased materials and services
Example Prerequisite requirements (Packaging)

- Contamination and migration
  - Microbiological, physical, chemical
    - Allergen management
- Cleaning – chemicals and tools, schedule
- Pest Control
- Rework – control procedures
- Withdrawal – traceability and recall procedures, mock audits
Example Prerequisite requirements (Packaging)

- Storage and Transport
  - Warehouse, vehicles, containers
- Consumer information
- Food defense
- Packaging design/development
HACCP

- Hazard Analysis and Critical Control Points
- Risk-based evaluation of manufacturing process
- Identifies high risk areas - Critical Control Points (CCPs)
- Allows companies to identify controls to eliminate or reduce the risk as much as possible
- Ties to Prerequisite and Food Safety Management programs
Food Safety Management Program

- Management objectives and plan, including meetings
- Training of employees
- Quality Management
- Internal auditing
- Documentation of meeting inputs and outputs
- Verification of critical control points
- Validation that implemented plan is working
- Documentation of all requirements
Getting Started…

1) Choose a scheme
   - benchmarked for the packaging category
   - confirm that customers will accept GFSI benchmark
   - Confirm that it fits your manufacturing needs
   - ISO 9001 consideration

2) Prepare
   - Designate a team leader
   - Conduct employee training
   - Establish company goals and policy
   - Develop HACCP plan
   - Put prerequisite programs in place
   - Begin internal audits
   - Implement Food Safety Management program

3) Conduct GAP analysis (recommended)

4) Select a third party certification body

5) Establish a certification target date
Certification

- Identify a third party certification body that is certified to audit for the chosen scheme
  - Scheduling may take some time
- Participate in audit
- Respond to audit findings with corrective actions
- Certification granted (or not…)
Benefits of Certification

- Certification provides
  - Customer assurance
  - Legal documentation
  - Reduction of total audits required
- Some customers may still require specific audits
- Work with customers to accept your GFSI recognized standard
Questions?

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