SQF Revision 9:

Management Overview for Food Processing Facilities

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PERRY JOHNSON FOOD SAFETY CONSULTING, INC.

FOREWORD

Over the past 30 years, I have had the opportunity to work with various international management systems, to include quality, environmental, lab, and of course, food safety systems. The common comment that I frequently hear is that the task to implement one of these systems is an arduous one. Interpreting the standard and knowing what the auditor will be looking for leaves pause to many that are responsible for certification for their company.

When the International Quality Management System standard debuted in 1987 (better known as ISO 9001), the training company I managed developed accredited courses and we went on to conduct training primarily via public seminars. Our accredited Lead Auditor Course had a high pass rate and we were one of the top training firms in the world. For many years we had trained more people than any other firm.

Although our training was deemed exceptional, once those trained individuals returned to their respective facilities, they struggled to implement the ISO 9000 system within their facility. They had been given the tools, so we thought, to prepare their organization for certification.

We found that even though companies had sent out individuals to be trained on the standard, these individuals struggled to implement the requirements. Over time our firm developed a streamlined approach that took companies from an initial gap assessment to the internal audit thus preparing the company for certification by an accredited certification body.

The companies we worked with were achieving certification in less than half of the time of those companies that did not seek assistance. Over the past 30 years and to date, this approach has and continues to be most successful with thousands of companies achieving certification.

This streamlined approach had been adopted at Perry Johnson Food Safety Consulting, Inc. where we assist those organizations in the food supply chain to attain SQF certification in a timely and cost-efficient manner.

Whether your company has a robust food safety system or are starting from scratch and are seeking SQF certification, contact us.

This overview booklet is designed to provide you with a better understanding of the SQF requirements.

Carrie Hayden
President - Perry Johnson Food Safety Consulting, Inc.

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THE USERS OF THIS GUIDE

This guide will be useful to managers and other personnel in organizations that meet any of the following criteria:

- Suppliers seeking to meet customer SQF registration mandates
- Companies seeking to remain abreast of worldwide SQFI requirements
- Firms planning to improve their quality assurance and food safety management programs
- Companies seeking a competitive advantage in the marketplace
- Companies desiring to make customer satisfaction a top priority

THE BENEFITS OF SQF

Becoming SQF certified lets customers and consumers know that your company has been verified as having a complete and effective food safety program. The following are just some of the benefits your company will realize:

- Provides proof of due diligence with respect to food safety
- Assurance that your company complies with regulatory requirements
- Increased consumer confidence and loyalty
- Increases marketability
- Improves the food safety culture
- Recognized around the world
- Food safety conscious work force reduces cost due to failures
- Compliance with FSMA (Food Safety Modernization Act)

WHAT IS SQF?

SQF is a Food Safety Management Certification Scheme, owned by SQFI (Safe Quality Food Institute). It originated in Australia and has been owned and operated by the Food Marketing Institute (FMI) since 2003.

The SQF program is a stringent food safety and quality certification program that helps food producers assure their buyers that their products have been handled according to the highest quality global food safety standards.

It is a worldwide organization, and one of many schemes recognized by GFSI (Global Food Safety Initiative) as an acceptable and credible food safety and quality program. *It is the only GFSI recognized standard that is considered "farm to fork", meaning that the code covers everything from Good Agricultural Practices, to processing, and retail.* This guide will focus on the manufacturing elements of the code.

The SQF food safety standard has a unique structure which includes a modular approach. **Module 2 of the standard is applied to all food manufacturers** and applies to basic management requirements and application of the HACCP process. The other modules of the standard are applied to the industry specific GMPs depending on what the company produces (such as meats, confectionery, beverages, etc.).

To allow flexibility, the SQF standard has different programs available to implement:

- SQF Fundamentals Program - Not GFSI Benchmarked
- SQF Food Safety Program - The food safety system is certified
- SQF Food Safety and Quality Program - The food safety and quality attributes system are certified

THE ROLE OF GFSI (GLOBAL FOOD SAFETY INITIATIVE) IN SQF

The **Global Food Safety Initiative**, which began in 2000, was created to ensure confidence in the delivery of safe food to consumers worldwide. At that time, food safety was a big concern due to several high-profile recalls, quarantines and negative publicity about the food industry. GFSI provides a platform for leading food safety experts from all over the world to collaborate and undertake current food safety issues. These experts work on a volunteer basis in order to reduce food safety risks, promote continuous improvement, and build trust throughout the food supply chain.

The GFSI objectives are to:

- Reduce food safety risks by delivering equivalence and convergence between effective food safety management systems
- Manage cost in the global food system by eliminating redundancy and improving operational efficiency
- Develop competencies and capacity building in food safety to create consistent and effective global food systems
- Provide a unique international stakeholder platform for collaboration, knowledge exchange and networking

One significant difference between GMP and GFSI audits is the focus of GFSI on a quality system. GFSI helps define the requirements for food safety through a benchmarking process. Within GFSI benchmarking is a ñprocedure by which a food safety-related scheme is compared to the GFSI Guidance Documentò. There are a number of food safety management schemes that fulfill the criteria of the GFSI guidance document and many of the worldôs largest food retailers are requiring supplier certification to the GFSI schemes.

GFSI certification can be obtained through a successful third-party audit according to any of the following schemes:

- BRCGS Global Standard for Food Safety
- BRCGS Global Standard for Packaging and Packaging Materials
- BRCGS Global Standard for Storage and Distribution
- CanadaGAP (Canadian Horticultural Council On-Farm Food Safety Program)
- FSSC 22000 Food Products
- Global Aquaculture Alliance Seafood - BAP Seafood Processing Standard
- GLOBALG.A.P. Integrated Farm Assurance Scheme
- Global Red Meat Standard (GRMS)
- IFS Food
- IFS Logistics
- IFS PACsecure
- PrimusGFS Standard
- SQF Safe Quality Food

CERTIFYING TO SQF VERSION 9

SQF certification is a tangible expression of a firmôs commitment to food safety that is internationally understood and accepted.

SQF certified organizations almost universally realize major increases in customer acceptance, as well as a reduction in cost. Many firms, already subject to food safety system standards imposed by major customers, find that the biggest effect of SQF certification is on their non-manufacturing functions and improvements in their food safety programs.

SQF certification is carried out by certification bodies (commonly called registrars), which are accredited organizations that review the facilityôs food safety manual and other documentation to ensure that they meet the standard. They also audit the firmôs processes to ensure that the food safety management system described in the documentation is in place and is effective.

Once certification is obtained, the certification body conducts yearly recertification audits of the facility to determine if its food safety system continues to meet the codeôs requirements; SQF is a code that requires periodic unannounced audits.

For a typical company attempting to implement and document these requirements on their own, it can take 2 or more years to prepare for certification. Much of the time being spent on what needs to be documented and the documentation and implementation process.

Perry Johnson Food Safety Consulting, Inc. offers a streamlined implementation approach that includes not only assistance on implementing the requirements, but also the development of HACCP plans and the SQF Food Safety Manual. Our implementation experts, many of whom have also conducted SQF certification audits, understand the requirements and how to best meet these requirements. This can save an organization time/money in maintaining their food safety system.

PJFSC – IMPLEMENTATION PROGRAM STEPS (MAY INCLUDE)

Step 1 Gap Assessment ï Perry Johnson consultants will assess the current state of compliance of your facility. This assessment will include a review of your facilityôs current practices including assessment of documentation required by the SQF code and executional practices, such as cleaning methods. Additionally, the consultant will evaluate the HACCP plan, if in place. At the conclusion of the initial consult, a written report will be provided. This report will identify the areas where the organization meets the requirements and where the organization does not meet the requirements to attain certification.

Step 2 Documentation Development ï Development of the Food Safety Manual, food safety procedures including procedures addressing prerequisite programs, and the HACCP plan, including identifying records to be retained as proof of ongoing food safety compliance. The documentation preparation will be conducted off site. Perry Johnson will help ensure that the system established is robust, effective, transparent and consistent.

Step 3 Consult ï Assist in implementing the developed program, including training management and staff on executing documented processes. Perry Johnson will also assist in training members of the Food Safety Team on maintenance of the Food Safety System.

Step 4 Internal Audit ï Once the Food Safety system has been established, documented and implemented, Perry Johnson will perform a full system internal audit.

Step 5 Close-out Nonconformances ï Thus preparing the organization for the certification audit by an accredited certification body.

The SQF Certification Process is a Two-Phase Process as Follows:

Desktop Audit ï This audit can be conducted either on-site or off-site. It is an audit of the documented procedures and processes. Nonconformances will be identified and must be closed out prior to the certification audit.

Certification Audit ï The certification body will likely schedule this audit to take place roughly 30 days after the desktop audit. This will allow some time for the organization to address the findings from the desktop audit. This full system facility audit will go into detail of the SQF System and Good Manufacturing Practicesôexecutional elements. The duration of the facility audit is based on a number of factors: size of the facility, employee count, number of HACCP plans and any customer specific addendums. All findings from the certification audit must be closed-out prior to the certification body issuing a certificate.

PRE-REQUISITE PROGRAMS – WHAT ARE THEY?

Pre-requisite programs are procedures and controls that are put into place to manage the processing environment to ensure safe food products. These programs, to include Good Manufacturing Practices, are the foundation of a food safety system.

Pre-requisite programs may vary and are contingent upon the type of food processing. Some of the more common examples of a pre-requisite program are as follows:

Glass/Brittle Plastic and Ceramics Control

This program includes procedures for training employees not to bring glass into processing plants. Lists will be maintained of glass, brittle plastic or ceramics that are allowed in processing areas due to necessity of the operation, such as glass dials on indicators. All glass, brittle plastic and ceramic items listed must be periodically verified to be in a good state of repair.

Personnel Practices

This program includes documented practices for staff, including requirements for hand washing, the use of hair restraints, cleanliness of clothing, handling of staff with illness, and include documented information relating to:

- When employees must wash hands;
- What sort of hair restraints are to be worn, such as hair and beard nets;
- Cleanliness requirements for clothing, or uniforms;
- Addressing staff items such as jewelry allowed to be worn, fingernail paint and extensions;
- Employee conduct such as smoking, eating and drinking in processing areas;
- Staff hygiene training on identifying sanitation failures;
- Reporting and handling of employee illness.

Facility and Grounds

Facility and grounds are practices that include management of the company's site(s) and building(s) to prevent food safety risks, these practices specifically address:

- Maintaining of the company's grounds in a manner that prevents potential food risks, such as standing water, dust and preventing build ups which may attract pests, this also includes managing and treating waste;
- Managing outside storage of ingredients and products in bulk containers;
- Managing the storage of equipment to prevent attracting pests;
- Providing adequate lighting and ventilation within the facility to allow adequate cleaning and prevent build-up of vapors or odors.

Sanitary Operations

This program includes maintaining of the company's facility and equipment in a condition that prevents product from becoming adulterated, this is often accomplished by developing and documenting SSOPs (Sanitation Standard Operating Procedures), these procedures will define what is to be cleaned, how to clean the item including what utensils and equipment to clean the item with, when to clean and who is responsible for cleaning the item.

- Cleaning and sanitizing equipment including food contact surfaces and utensils within the facility, the overall cleaning plan may be maintained via the use of a Master Sanitation Schedule (MSS), which will detail what items or areas are to be cleaned and the scheduled date to clean the item or areas;
- Control of chemicals - this control is often accomplished by properly identifying chemicals, and having an approval method of what chemicals are allowed as well as maintaining a documented list and inventory of the approved chemicals, these chemicals include cleaning and sanitizing chemicals, maintenance chemicals and pesticides;
- Elimination of pests via cleaning and pest control.

Sanitary Facilities and Controls

- Ensuring that water used to wash hands, clean or as an ingredient in food is potable, this is typically accomplished by periodic testing of the water within the facility using ISO 17025 approved independent laboratories;
- Providing enough drains and maintaining those drains to prevent conditions of standing water within the facility;
- Providing an adequate number of toilet facilities that have hand-washing that includes hot water, soap, toweling and are kept clean and well supplied;
- Providing an adequate number of hand-washing sinks that includes hot water, soap, toweling and are kept clean and well supplied;
- Managing waste products to prevent build ups that may cause odors or build ups that may attract pests.

Equipment and Utensils

This program includes designing and maintaining the company's equipment and utensils to prevent the potential for contamination of product.

- Managing equipment and utensil design in a manner that allows adequate cleaning and prevents contamination, this typically means that the equipment used in areas where the interaction with water is common is made from stainless steel, food contact surfaces are made from non-porous materials such as plastics;
- Seams in equipment and utensils are closed to prevent build ups of product;
- Freezers and cold storage units that are used to hold product that has a reasonable potential of growth of microorganisms be fitted with a thermometer or temperature recorder, and that the temperatures be monitored;
- Equipment that is used to record key processing parameters such as pH, water activity, etc. be accurate and properly maintained;
- Compressed or other gases (such as nitrogen used as a preservative) used directly on food, on food packaging, or used to clean food contact surfaces must not be contaminated.

Processes and Controls

This program includes ensuring that cleaning is performed by competent personnel, that allergen cross-contact be prevented, and that ingredients and finished products be managed to prevent pathogenic growth.

- Sanitation of the facility must be controlled by competent, trained staff;
- Documented allergen controls must be in place to prevent cross-contamination, the controls typically ensure that allergen containing products are identified, segregated, and cleaning is managed in a way to ensure that any traces of allergens are removed when allergens differ from run to run;
- Testing be performed to ensure that identify sanitation and other cleaning failures be identified and remedied, this is typically performed by trained staff as part of the documented pre-operational inspection;
- Potentially contaminated food be managed in a way that prevents unintended use, this is typically managed via the use of a documented nonconformity process;
- Performing a documented inspection of incoming ingredients to ensure that the items pose no food safety threat, if the ingredients can potentially contain pathogenic microorganisms that they be treated with a kill step, such as pasteurization, and be stored at suitable temperatures;
- Equipment and utensils used to process food items be cleaned and sanitized, as needed;
- Work in-process and finished goods must be maintained in a manner to prevent cross-contamination with unprocessed items and dissimilar allergens;
- Foreign materials such as wood or metal be prevented, metal is typically prevented via the use of screens, sieves and metal detectors;
- Food and raw materials must be disposed of in a manner that prevents possible contamination of product.

HACCP

HACCP is a methodology for identifying and controlling the key risks of a food manufacturing process in order to reduce or eliminate the risk completely.

There are 7 common steps on developing a HACCP plan.

1. Conduct a Hazard Analysis

Determine the food safety hazards and identify the preventive measures that can be applied to control the hazards. A food safety hazard is any biological, chemical, or physical property that may cause a food to be unsafe for consumption. An example of a biological hazard would be Salmonella; chemical hazards could be undeclared food allergens such as peanuts; and a physical hazard could be glass.

The best method to identify the potential hazards is to list the ingredients and document the process flow. Once this is completed, each ingredient is analyzed for potential hazards in the process flow.

2. Identify Critical Control Points

A Critical Control Point (CCP) is a point, step, or procedure in a food manufacturing process where an action can be taken to either eliminate or reduce to an acceptable level an identified food safety risk.

An example of this type of control includes cooking to a temperature for a sufficient amount of time to kill target pathogens (harmful bacteria, such as Salmonella).

3. Establish Limits for Each Critical Control Point

A critical limit is the maximum or minimum value to which a physical, biological, or chemical hazard must be controlled to prevent, reduce, or eliminate the hazard.

An example of a critical limit is cooking meat to a minimum core temperature of 165 degrees and holding that core temperature for at least 30 seconds. This is the temperature recommended to kill pathogenic bacteria in most meats.

4. Establish Monitoring Requirements for the Critical Control Points

Monitoring activities are necessary to ensure that the process is under control at each critical control point.

An example of this monitoring is to verify and record the core temperature and holding time for each piece of meat to be sold.

5. Establish Corrective Actions

These are actions to be taken when monitoring indicates a deviation from the established critical limit. The HACCP plan identifies the corrective action to be taken when this occurs. Corrective actions are intended to ensure that no product that has not been processed to the critical limits reaches the marketplace. Corrective actions are typically pre-determined, and the actions taken must be documented.

An example of a corrective action might be to reprocess each piece of meat in a batch that has not met the minimum temperature and hold time.

6. Establish Procedures to Ensure the HACCP System is Working as Intended

Validation ensures that Critical Limits established do what they were designed to do.

An example is to verify that the established critical limits of cooking temperatures and hold times actually kills the target pathogens.

Verification ensures the HACCP plan is being executed as defined.

An example of verification is to review Critical Control Point records to ensure that the product is reaching the intended control temperatures and times, that the sampling frequency is being performed as defined, and that corrective actions identified are being carried out as required.

7. Establish Record Keeping Procedures

Records must be maintained, including the HACCP plan, hazard analysis, critical control points monitoring, validation results, verification activities, and the handling of deviations, as well as any corrective action taken.

SQF CODE

The SQF code is defined into 2 auditable modules. Module 2 - the SQF System Fundamentals Module contains the common elements that apply to all facilities. One of the Good Manufacturing Practices modules, 3, 4, 9, 10, 11 or 13 will also apply, according to your specific food sector category (FSC, listed below), packaging uses module 13 and storage and distribution uses module 12.

Elements in module 2 identified as ñmandatoryò cannot be excluded from the food safety management system. Elements that are not mandatory may be excluded, provided adequate justification (such as risk analysis) can be provided.

The following chart provides the food sector category (FSC) and applicable SQF module.

SQF FOOD CODE FOR MANUFACTURING		
FSC	**Category**	**Applicable Module**
10	Dairy Food Processing	Module 11: GMP for Processing Food Products
11	Honey Processing	Module 11: GMP for Processing Food Products
12	Egg Processing	Module 11: GMP for Processing Food Products
13	Bakery and Snack Food Processing	Module 11: GMP for Processing Food Products
14	Fruit, Vegetable and Nut Processing, and Fruit Juices	Module 11: GMP for Processing Food Products
15	Canning, UHT, and Aseptic Operations	Module 11: GMP for Processing Food Products
16	Ice, Drink, and Beverage Processing	Module 11: GMP for Processing Food Products
17	Confectionery Manufacturing	Module 11: GMP for Processing Food Products
18	Preserved Food Manufacturing	Module 11: GMP for Processing Food Products
19	Food Ingredient Manufacturing	Module 11: GMP for Processing Food Products
20	Recipe Meals Manufacturing	Module 11: GMP for Processing Food Products
21	Oils, Fats, and the Manufacturing of Oil and Fat-based Spreads	Module 11: GMP for Processing Food Products
22	Processing of Cereal Grains	Module 11: GMP for Processing Food Products
25	Repackaging of Products Not Manufactured On-Site	Module 11: GMP for Processing Food Products
33	Food Processing Aids Manufacturing	Module 11: GMP for Processing Food Products

SQF SYSTEM FUNDAMENTAL MODULE 2

2.1 Management Commitment

2.1.1 Food Safety Policy (Mandatory) - This element requires that Senior Site Management documents a food safety policy that defines the site's commitment to supplying safe food, establish a food safety culture, meet customer and regulatory requirements and continually improves the food safety system. The documented policy is to be signed by senior management and be available in all languages spoken at the site. It must also be displayed in prominent locations, such as in breakrooms and the lobby.

Senior site management is to lead the food safety culture and is to be held accountable for the site's food safety system.

The reporting structure of the site is to be defined and is to be defined, roles are to have responsibilities assigned and backups for key personnel are to be documented.

An SQF Practitioner is to be named. This individual is responsible for overseeing the Food Safety system. The Practitioner is required to be a full-time employee of the company, hold a leadership role, and have an understanding of HACCP and the SQF code. Auditors will typically look for a HACCP certification and quiz the Practitioner on elements of SQF to ensure their understanding of the code.

2.1.2 Management Review (Mandatory) - Management review is a meeting that is required to be held on a minimum yearly basis, be attended by Site Senior Management, and records of these meetings are to be retained.

The process for management review must be documented. There are several required topics of discussion, including review of the Food Safety Manual, customer complaints, corrective action, internal and external audit findings. The meeting also requires a review of the results of previous management reviews.

The SQF Practitioner is required to update Senior Site Management on a minimum monthly basis on the status of the SQF system.

2.1.3 Complaint Management (Mandatory) - Customer complaint handling requires a documented procedure. Customer complaints are to be analyzed and records of the causes and corrective actions, when applicable, are to be retained. Customer complaints are to be trended and reviewed as part of the management review process.

2.2 Document Control and Records

2.2.1 Food Safety Management System (Mandatory) - Requires that the Food Safety Management System be documented and address the requirements of the SQF code. This documentation needs to include the scope of products produced at the site, the food safety policy and all pre-requisite programs.

2.2.2 Document Control (Mandatory) - Requires a procedure that addresses the methods to create and revise Food Safety Management System documentation.

2.2.3 Records (Mandatory) - Requires a procedure that addresses the methods for retaining records of the operation of the Food Safety Management System, a list of records to be retained, and the time length for retention to meet customer and regulatory requirements.

2.3 Specifications, Formulations, Realization and Supplier Approval

2.3.1 Product Formulation and Realization - Documented product specifications are generally required to be maintained, which address product formulation, shelf life requirements, and product processing. Food safety plans developed are to be validated and verified.

2.3.2 Specifications (Raw Material, Packaging, Finished Product and Services) - Specifications for raw materials, packaging, additives/processing aids and finished products are to be documented.

2.3.3 Contract Manufacturers - Risks associated with the use of contract manufactures must be defined when used.

2.3.4 Approved Supplier Program (Mandatory) - A documented risk-based program must be developed that defines how to select, evaluate and reevaluate suppliers of ingredients, food additives and packaging. A register of the approved suppliers is to be maintained.

2.4 Food Safety System

2.4.1 Food Legislation (Mandatory) - Products produced at the site must meet applicable regulatory requirements, including limits for foreign materials and residues, weights and measures. Site management must be informed on changing food regulatory requirements, such as FSMA and SQFI. The siteôs CB (Certification Body) is required to be notified in the event of a food safety recall or regulatory warning.

2.4.2 Good Manufacturing Practices (Mandatory) - Good manufacturing practices applicable to the types of items produced at the site must be documented and in place or must be exempted via the use of risk analysis.

2.4.3 Food Safety Plan (Mandatory) - A documented food safety plan must be in place. The plan shall be based on HACCP guidelines established in the Codex Alimentarius. Food hazards including chemical hazards such as food allergens, physical hazards such as glass, and biological hazards such as Salmonella are to be identified in each step of the process where they may occur. Measures are to be put in place which will control or eliminate these identified hazards, such as x-ray inspection to control broken glass.

The plan is to be developed and maintained by a multidisciplinary team, typically consisting of representatives from engineering, processing, maintenance, quality and senior site management.

2.4.4 Product Sampling and Analysis - The process for sampling and inspecting raw materials, work in process and finished items must be documented. The methods employed must ensure that products produced are verified to be in conformance with customer and regulatory specifications. Personnel tasked with performing and approving inspections and analysis are required to be competent via proficiency testing. These tests are required to be performed yearly, at a minimum. If the tests are conducted by outside entities, these entities must be ISO 17025 accredited, or equivalent.

2.4.5 Nonconforming Materials and Product - A documented process must be established which addresses the methods for ensuring that nonconforming, or suspect product, packaging or ingredients does not enter commerce.

2.4.6 Product Rework - A documented process is to be developed in cases where product is reworked or reused. Records of rework are to be retained.

2.4.7 Product Release (Mandatory) - The process for releasing products into commerce, after all required inspections have been performed, is to be defined and documented. Records of products released and the inspections performed are to be retained.

2.4.8 Environmental Monitoring - Environmental monitoring is a program that evaluates the manufacturing environment for target pathogens or indicator species. Pathogens consist of microorganisms including E. Coli 157, Listeria Monocytogenes or Salmonella. SQF code requires that a documented plan be developed that, based on identified risk, monitors the manufacturing environment for the presence of these microorganisms. The documented plan must address the target pathogens or indicator bacteria, the frequency of sampling, areas that are to be sampled, and the actions to be taken when unsatisfactory results are encountered.

2.5 SQF System Verification

2.5.1 Validation and Effectiveness (Mandatory) - Validation consists of proving that the selected method or process effectively controls the targeted characteristic, such as proving that cooking at 300 degrees for 2 minutes kills the bacteria in your product. The methods for validating the Good Manufacturing Practices are achieving their identified results and that critical control points are effectively controlling the targeted food safety risk within the site must be documented. Validations must be performed when processes are changed, or otherwise yearly, at a minimum. Validation records must be maintained.

2.5.2 Verification Activities (Mandatory) - Verification, as it applies to food safety, consists of proving that the methods defined to control food safety are being executed in the prescribed manner. The methods for verification must be documented, including a schedule for verification activities. Good Manufacturing Practices, Critical Control Points, and Preventive Controls identified in HACCP are required to be verified yearly, at a minimum. Records of verifications must be maintained.

2.5.3 Corrective and Preventive Action (Mandatory) - Corrective Action is a process that corrects an existing problem, such as an identified food safety issue. Preventive action is a process that corrects the potential for a problem. The corrective and preventive action processes must be documented, including the steps for identifying the root cause, the corrective/preventive action taken and the methods for ensuring that the action put into place are effective. Records resulting from these actions must be maintained.

2.5.4 Internal Audits and Inspections (Mandatory) - The process for performing internal audits must be documented and in place. Internal audits are required to be conducted yearly, by competent, independent personnel. The system employed must verify that the entire food safety system, including all applicable elements of the SQF code are audited. Additionally, internal auditing practices must ensure that equipment and Good Manufacturing Practices are periodically audited. Correction and corrective actions resulting from auditing activities must be documented. Records of internal audits must be maintained.

2.6 Product Identification, Trace, Withdrawal and Recall

2.6.1 Product Identification (Mandatory) - The methods for identifying ingredients, packaging, work in process, intermediate products and finished items, including labeling must be documented and in place, including the start-up and product change over process. Records of product identification must be maintained.

2.6.2 Product Trace (Mandatory) - The process for defining product traceability must be in place and documented. Traceability requirements extend to ingredients, direct food contact packaging (referred to as one down), and shipments to the customer or intermediate locations (referred to as one up). Traceability records, including product rework must be maintained.

2.6.3 Product Withdrawal and Recall (Mandatory) - The process for conducting product recall, including the recall team members, and communications channels, including regulatory, SQFI, and Certification Bodies must be documented. Mock recall exercises must be conducted yearly, at a minimum. Records of mock recall and any actual recall records must be maintained.

2.6.4 Crisis Management Planning - A crisis management plan is to be documented which addresses potential types of crises, such as tornados, hurricanes or other disasters. The documented plan addresses the responsibilities of the crisis management team, the crisis management training needs, and handling of potentially affected products. It also addresses communication activities to both internal and external parties.

The crisis plan is to be tested yearly. Records of the test are to be retained.

2.7 Food Defense and Food Fraud

2.7.1 Food Defense Plan (Mandatory) - A food defense plan must be documented and in place. The plan must address the responsible senior site management's roles, site authorization access, and protecting ingredients and finished products from acts of deliberate adulteration. The documented plan must be reviewed and tested yearly via challenges. Records of reviews and challenges must be maintained.

2.7.2 Food Fraud - Food fraud is the adulteration of food items, by mislabeling, counterfeiting, diluting or selling stolen items for economic gains. An example would be adding corn syrup to honey to increase the volume of the product. The site must identify and document these vulnerabilities. The documented plan must include the mitigation actions for the identified risks. The plan must be reviewed annually. Records of any testing undertaken to verify compliance, and the annual verification test must be maintained.

2.8 Allergen Management

2.8.1 Allergen Management for Food Manufacturing (Mandatory) - The methods to control allergens and prevent cross contact of allergens must be documented. The documented methods must include (as appropriate), a risk analysis of ingredients, packaging, and processing aids. This includes food grade lubricants that contain food allergens and an assessment of the work environment's potential allergen cross contamination points, such as allergens in vending machines.

The documented procedure should give consideration to product change over verification, reworked materials, and label verification activities. Documented Allergen awareness training is required for all employees.

A register of allergens applicable in the country of manufacture and destination (when known) must be developed and maintained.

The methods to control allergens and prevent cross contact of allergens as it applies to pet food must be documented. The documented methods must include (as appropriate), a risk analysis of ingredients, packaging, and processing aids. This includes food grade lubricants that contain food allergens and an assessment of the work environmentôs potential allergen cross contamination points, such as allergens in vending machines.

Sites that only manufacture animal feed, and donôt handle or store pet food or pet food products, are not required to have an allergen process by regulatory agencies or customers. When these plans are required by regulatory agencies or customers, the methods identified in 2.8.2 above, apply.

2.9 Training

2.9.1 Training Requirements - This process is for defining and implementing a method for ensuring competency of the employees who affect the companyôs SQF compliance and product food safety. Regulatory compliance must be documented.

2.9.2 Training Program (Mandatory) - The staff training program must be documented and in place. The program being used applies to all staff members who are responsible for developing and applying the SQF system and Good Manufacturing Practices, managing food regulatory requirements, and managing the HACCP or Food Safety Plan.

Documented training is required for all staff engaged in developing and maintaining the HACCP and food safety plan(s).

Training and instructional materials must be in the language understood by staff to be trained.

The established training program is required to include identification and implementing refresher training needs.

A register of training must be documented and maintained. The register must include: staff trainee name, skills trained, trainer name, and supervisor verification of the effectiveness of the training.

GOOD MANUFACTURING PRACTICES MODULE 11

Modules 3, 4, 9, 10, 12 and 13 have similar requirements to module 11, which are defined below. Module 11 is considered to be the most inclusive.

Requirement

11.1 Site Location and Premises

11.1.1 Premises Location and Approval - Premises must be located in a manner that surrounding buildings and operations do no impact food safety. Site operations must be approved by relevant regulatory bodies.

11.1.2 Building Materials - Floors are to ne smooth and dense and effectively drained. Drains are to be easy to be cleaned and pose no hazard. Walls, partitions, ceilings and doors are to be durable, light colored and easy to clean. Ducting and pipes are to be constructed in a way that prevents contamination, stairs and catwalks in processing areas in a way that prevents potential contamination of products.

11.1.3 Lightings and Light Fittings - Light intensity in inspection and processing areas must have an intensity that does not prohibit the tasks being performed in the area. Bulbs in these areas must be shatterproof or covered with shatterproof materials.

11.2 Construction of Premises and Equipment

11.2.1 Food contact and non-food contact surfaces must be made from materials that do not pose a food safety risk.

11.2.2 Floors, Drains, and Waste Traps - Floors must be smooth and made from materials that are not affected by chemicals and are easily cleaned. Floors should slope toward drains. Drains must be easily cleaned. Waste traps cannot be located in food handling areas and entrances.

11.2.3 Walls, Partitions, Floors and Ceilings - Walls, ceilings and doors must be made from materials that do not degrade and are light colored. Wall to wall and wall to floor joints must be designed to be easily cleaned to prevent harborage. Overhead items including ducts and pipes must be made in a manner that do not pose a food safety risk.

11.2.4 Stairs, Catwalks and Platforms - Catwalks, stairs and platforms in food processing areas must be made in a manner that prevents contamination of products.

11.1.3 Lightings and Light Fittings - Light intensity in inspection and processing areas must have an intensity that does not prohibit the tasks being performed in the area. Bulbs in these areas must be shatterproof or covered with shatterproof materials.

11.1.4 Inspection / Quality Control Area - Inspection areas must have access to hand washing, waste containers and be maintained to prevent food safety risk.

11.1.5 Dust, Insect, and Pest Proofing - External openings must be sealed to prevent pest entrance. Staff and visitor doors must be self-closing and insect proofed. Overhead doors in processing areas must have screens, seals or other means to prevent insects. Pest control lights cannot pose a food safety risk. Rodenticides cannot be used in processing areas.

11.1.6 Ventilation - Adequate ventilation is required in processing areas. When used, ventilation devises and hoods must be maintained to prevent condensation or other food safety risks.

11.1.7 Equipment and Utensils - Procedures and specifications for the purchase of equipment and utensils must be documented. Equipment and utensils must be designed and installed in a way that prevents food safety risks. Tables and processing equipment, including conveyors and bins must be made of impervious materials and maintained in a manner to prevent food safety risks.

11.1.8 Grounds and Roadways - Process must be in place to maintain grounds and roadways in a manner to prevent food safety risks, including minimizing dust. Periodic monitoring must be performed and documented.

11.2 Site Operation

11.2.1 Repair and Equipment Maintenance - The maintenance process must be documented. Ongoing maintenance must be scheduled and documented. The schedule must include infrastructure such as the building, equipment and premises. Equipment breakdowns and maintenance records must be maintained. Temporary repairs must be cleanable and must be have a documented plan in place to be removed as soon as possible. Food grade lubricants and paints are to be used in food processing areas.

11.2.2 Maintenance Staff and Contractors - Maintenance staff and contractors are required to comply with site personnel and hygiene requirements. When repairs are completed tools are to be removed. The maintenance and facility supervisors are to be notified when repairs are completed so that cleaning and inspection of the repair can take place.

11.2.3 Calibration

11.2.3 Calibration - Calibration methods must be documented and in place. In cases where equipment is found to be outside of the allowable limits, the effect on product and processes must be assessed and documented. Calibrations must be to national or international standards. Records of calibrations must be maintained.

11.2.4 Pest Prevention

11.2.4 Pest Prevention - The methods for preventing pests must be documented and in place. Harborage spots in machines, processing or storage must be prevented. In cases where ingredients or product is found to be contaminated by pests, the affected items must be disposed of and a record of the disposal must be maintained. Records of pest sightings, approved chemicals to treat pests and SDS, chemical treatments to prevent pests must be maintained. Additionally, employee awareness training for pest control and application of treatments, (if applicable) trends or other measurements of effectiveness of the plan must be maintained. Inspections for pests must take place on a regular basis, records of these inspections must be maintained. If using pest contractors, the contractors must be approved, licensed, use only approved chemicals and report to an authorized individual when entering or leaving the site. Records of the results of inspections must be maintained. Pesticides must he handled according to directions, clearly labeled, stored under controlled conditions and disposed of in accordance with regulations.

11.2.5 Cleaning and Sanitation

11.2.5 Cleaning and Sanitation -The methods for cleaning infrastructure and the manufacturing environment, including equipment, processing areas and restrooms must be documented. Cleaning documentation must define what, how, when and who is to clean identified items, records of cleaning, as well as the effectiveness verification must be maintained. Employee areas such as restrooms and other common use areas, must be inspected by designated staff at defined frequencies.

Equipment such as cutting boards, knives and other processing utensils must be cleaned in a manner that does not interfere with processing. Racks or other methods of storing cleaned equipment must be provided, as applicable. Cleaning and sanitizing agents used must be intended for food manufacturing and must meet applicable regulatory requirements and be used in the manufacturerõs recommended concentrations. Records of approved chemicals, periodic inventories taken, training of applicable staff in chemical usage, pre-operational inspections after cleaning and SDS for these chemicals must be maintained.

11.3 Personnel Welfare

11.3.1 Personnel - Carriers and personnel suffering from infectious disease, or personnel with open wounds are not permitted to handle product or work in processing. Methods must be employed to prevent body fluids from contaminating products. Eating, drinking smoking or spitting is not allowed in food processing and handling areas, except drinking of water from site approved containers.

11.3.2 Hand Washing - Hand wash sinks must be available near staff entry areas, and throughout the site, as appropriate. Hand wash is to take place after restroom use, smoking, eating, drinking, using tissues, handling wash hoses, hand to floor contact or handling contaminated items. The hand washing sinks must be in good repair, have warm water, soap, paper towels and trash receptacles. Hands free spigots and hand sanitizer must be provided in high risk processing areas. A hand washing sign must be posted in areas near sinks and in restrooms. The signs must be in languages understood at the site.

11.3.3 Clothing and Personal Effects - A risk analysis must be documented to determine if the steps taken regarding employee uniforms and hair protection devices are adequate to prevent physical and biological contaminants. Clothing and shoes worn by processing staff must be clean at the start of the shift and should be changed if they become so soiled that they pose a food safety risk. Disposable items, such as gloves and aprons should be changed after each break or when worn or damaged.

Staff and visitors are not permitted to wear jewelry, except bands without stones, or medical alert bracelets, providing that there are no customer or regulatory requirements against wearing these items.

11.3.4 Visitors - Visitors are required to wear suitable clothing and footwear, typically no sleeveless shirts or shorts, as well as closed-toed shoes. Jewelry is not permitted. Visitors that are noticeably ill are not allowed in processing areas. Visitors are required be trained and comply with applicable food safety and hand washing protocols. Records of this training must be maintained.

11.3.5 Staff Amenities (change rooms, toilets, break rooms) - Processing staff must be provided with amenities that are adequately lighted and ventilated.

Restrooms of sufficient quantity for staff size, must be separated from processing areas. Hand washing sinks must be provided inside or immediately outside restrooms, and uniform storage racks/hooks must be provided adjacent to restrooms. Restrooms must be easily cleanable and maintained in clean condition.

Site must provide breakrooms that are well lit and ventilated, away from processing areas, have sinks with hot and cold water to wash utensils, have refrigeration and heating appliances to heat food. Lunchrooms and outside eating areas must be maintained to prevent pest attractants and harborage. Hand wash signs must be posted in the languages understood and be displayed near staff entrances.

Processing staff must be provided with amenities that are adequately lighted and ventilated.

Change room must be provided for employees that are in high risk processing areas. Consideration must be given to storage of staffs street clothing. When required, showers must be provided for staff.

11.4 Personnel Processing Practices

11.4.1 Staff Engaged in Food Handling and Processing Operations - Staff is required to handle materials and products in a manner that prevent potential contamination and damage. Exterior doors are to remain closed and are not to be left open. Containers of products and materials must be kept off of the floor. Waste must be stored in identified receptacles and must be removed to prevent build up. Staff is required to wear hairnets and are not permitted to eat or taste products.

Staff is not permitted to wear false eyelashes, long or fake nails, or nail polish. In cases where sensory evaluation of product is required in processing areas, only approved staff that practice good hygiene are permitted to do so. Wash down hoses are not permitted to be store on the floor and must be stored on designated hose racks.

11.5 Water, Ice, and Air Supply

11.5.1 Water Supply - Hot and cold potable water must be available for processing and cleaning processes. Practices must ensure that potable water does not become contaminated. Backflow devices must be used in cases where potable water might be contaminated. Non-potable water must be identified and must not contaminate potable water. Water, when stored on site must be maintained to prevent contamination.

11.5.2 Water Treatment - Water treatment, when used on site must be monitored, and if used as an ingredient or for cleaning, must be tested for potability.

11.5.3 Water Quality - Water is required to meet local, national and international potable water, microbiological and quality standards.

11.5.4 Ice Supply - Ice when used for as an ingredient or in processing must be potable. Ice storage and handling equipment must not contaminate product.

11.5.5 Air and Other Gases - Gases and air that contact food, packaging, or food contact surfaces must be monitored to ensure that they do not pose a food safety risk.

11.6 Receipt, Storage and Transport

11.6.1 Receipt, Storage and Handling of Goods - A storage plan must be documented and in place. The plan must cover, as applicable, raw materials/ingredients, packaging, chemicals and equipment. The process in place must include, as appropriate, stock rotation, and ensure that products do not exceed shelf life.

11.6.2 Cold Storage, Freezing and Chilling of Foods - Freezing and Chilling of Foods-Freezers and refrigerators must be monitored for temperature and maintained in clean conditions. Condensates must be controlled to prevent contamination of product.

11.6.3 Storage of Dry Ingredients, Packaging and Shelf Stable Packaged Goods - Storage areas for ingredients and packaging must be stored away from wet areas. Racks must be constructed of non-porous materials and allow for cleaning. Vehicles used in product and ingredient handling must not pose a food safety risk.

11.6.4 Storage of Hazardous Chemicals and Toxic Substances - Hazardous chemicals that could potentially pose a food safety risk must be stored to prevent a risk to staff, equipment, utensils, and product. Chemicals must be maintained in original containers or must be clearly labeled when stored in other containers.

Chemicals used for cleaning and sanitizing must be stored away from pesticides and rodenticides. Chemicals must comply with local and national regulations. Hazardous chemicals must have appropriate signs identifying them. Employees using chemicals must have training and instructions readily available. Records of training must be documented. First aid and spill kits must be readily available.

11.6.5 Loading, Transport, and Unloading Practices - The methods for loading and transporting must be documented and in place. The practices must not pose a food safety risk.

11.6.6 Loading - Vehicles used to transport product must be inspected before loading to ensure that the vehicle is clean and does not have odors. Loading methods must not pose a food safety risk. Vehicles shall be sealed with tamper proof seals, once loaded.

11.6.7 Transport - Refrigerated vehicles must be verified when being loaded and periodically thereafter. Records of temperatures must be maintained.

11.6.8 Unloading - Before unloading refrigerated vehicles, the temperatures must be verified and recorded. Unloading methods must not pose a food safety risk.

11.7 Separation of Functions

11.7.1 High Risk Processes - When processing or handling high risk products, after kill steps or process interventions, products must be segregated and handled in a manner that protects the product from cross contamination from employees, ingredients or unprocessed items. Staff working in high risk processing areas must wear protective or over clothing that is distinctive from other processing areas.

11.7.2 Thawing of Food - Thawing of product must take place with equipment and rooms that are adequate. Water thawing is to take place in continuous flow that prevents product deterioration or contamination. Air thawing must take place under controlled temperature and rates that prevent product deterioration or contamination.

11.7.3 Control of Foreign Matter Contamination - The process for preventing foreign material contamination must be documented, in place and communicated to staff. Ongoing inspections of equipment and the plant environment is required to ensure that the conditions do not pose a food safety risk. Glass, brittle plastic and ceramic within the processing and storage areas must be documented on a register that defines the locations within the areas. Glass items adjacent to processing, such as glass dials must be inspected at the start and finish of each shift. Wooden utensils and pallets must be dedicated to the assigned task, maintained and periodically inspected to ensure that they remain in serviceable condition. Loose metal items in processing must be secured to prevent food safety issues. Knives used in processing and packaging must be kept clean and maintained. Snap off blades are not permitted in processing and storage areas.

11.7.4 Detection of Foreign Objects - The process for monitoring screens, filters and sieves must be documented and in place. Metal detectors must be designed in a manner that isolates rejected items. Metal detectors must be periodically verified and validated. Records of monitoring of metal detection, or similar devices and subsequent corrective actions resulting from nonconforming product must be maintained.

11.7.7 Managing Foreign Matter Contamination Incidents - When foreign material contamination occurs, affected product must be isolated, inspected, reworked or disposed of. In cases of glass breakage, the areas where the breakage occurred must be completely cleaned.

11.8 On-Site Laboratories

11.8.1 Location - On-site laboratories must be located separate from processing when chemical and microbiological testing is performed and can only be accessed by authorized personnel. Signage is required to identify laboratories as restricted access.

Laboratory waste must be stored separately from food waste.

11.9 Waste Disposal

11.9.1 Dry and Liquid Waste Disposal - The process for collecting, handling and storing waste must be documented and in place. Waste must be regularly disposed of.

Waste transportation and storage bins and areas must be maintained to prevent harborage. The process for disposing of trademarked materials must be documented. Waste to be used for animal feed must be stored and handled in a manner to prevent food safety risks to animals. Daily hygiene audits are required to ensure waste is adequately handled and they must be documented.

CONCLUSION

Since its initial release in 1994 the SQF Code has had an enormous impact on the food processing industry around the world.

In the short run, certifying to SQF has a major and positive impact on food safety, consistency of methods and cost reduction. An SQF certification can give businesses unmatched credibility. SQFI maintains a database of companies that have been SQF certified, these are amount the most preferred suppliers of food items within the industry.

In the long run, SQF implementation and certification will preserve and create domestic and international markets for American businesses in virtually every field. Even now, many major national and international food processors and retailers are requiring SQF certification of its suppliers.

There are many choices for food safety certification, but only one with the designation for ñfarm to forkò

SQF is a very stringent and comprehensive ñfarm to forkòquality and food safety program. It is designed to meet all areas of the food supply chain and is recognized by Global Food Safety Initiative as a credible program that can improve your facilityôs food safety, quality, and cost reduction.

SQF is recognized by companies all over the world that require HACCP food safety and quality programs by their suppliers.

Perry Johnson Food Safety Consulting, Inc.

We provide a variety of services based on our customerôs specific needs. Some of the services we provide are listed below. Contact a Program Coordinator to discuss your specific needs and timeline.

- SQF Complete Implementation Program
  - Gap Assessment ï with action plan
  - Hands-On Training
  - Implementation Assistance
  - Development of Documentation*
  - Internal Audit Services
- HACCP Development
- Food Safety Manual Preparation
- Good Manufacturing Practices (GMPs)
  - Implementation
  - Documentation

- SQF Internal Auditor Training
  - We will train your audit team to perform regular internal audits as required by the standard
- SQF Internal Audit Services
  - PJFSC can prepare your audit plan
  - Conduct your audit
  - Address the nonconformances found during the audit
- Post certification assistance
  - Need help in correcting nonconformances? We can help!

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