WHITE PAPER ⋮ SQF Edition 8:
FOCUS ON HYGIENE AND SANITATION

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SQF DEFINED:

SQF stands for "Safe Quality Food." It is a global standard that focuses on the systematic application of Codex Alimentarius, HACCP principles, and guidelines for controlling food safety and quality hazards. SQF certification proves to stakeholders that a food facility is committed to producing safe and quality food, and that the site is complying with the relevant SQF Code and applicable food legislation.

Developed in Australia in 1994, the SQF program is currently owned by Food Marketing Institute (FMI) and operated by FMI's division, the Safe Quality Food Institute (SQFI) since 2003. SQF has been recognized by the Global Food Safety Initiative (GFSI) since 2004 as a standard that meets its benchmarking requirements. For close to a decade, SQF participation has been growing internationally, but especially in North America. As of 2017, about 70% of the global SQF certified sites were located in the US.

SQF Edition 8 is the new food safety standard that sites will be audited against as of Jan. 2, 2018. Food facilities will no longer be certified against the previous SQF Edition 7.2.

INTRODUCTION

The SQF certification program can help facilities comply with crucial hygiene and sanitation requirements, as there is an enhanced focus in preventing, eliminating, and significantly minimizing food safety hazards of public health and legal significance.

SQF certification offers numerous benefits to sites, including:

• Greater management commitment, which can improve food safety culture among employees

• Reliable, accredited, and globally recognized certification program

• Food safety compliance to meet regulatory, industrial, and customer requirements

• Prevention of foodborne outbreaks, recalls, and product withdrawals

• Increased operational efficiencies by reducing incidences of waste and rework

• Lowered costs and enhanced profitability of the enterprise, and much more…

This whitepaper explores the notable contributions of **SQF Edition 8 Food Safety Code for Manufacturing**, as a global standard, toward developing, implementing, and maintaining sanitation controls and hygiene practices within food and beverage processing sites.

GLOBAL EMERGENCE OF GFSI BENCHMARKED CERTIFICATION PROGRAMS

SQF is a popular, modularized, GFSI-recognized, farm-to-fork supply chain solution that covers the entire food industry from primary production, manufacturing, storage, and distribution, to the retail sector. Global Food Safety Initiative (GFSI) was established in 2000 by the Consumer Goods Forum (an international trade association operating under Belgian law), and as an industry initiative, it provides a benchmark of convergence and equivalence for global food safety standards. Other equivalently popular GFSI benchmarked standards are: BRC, FSSC 22000, IFS, PrimusGFS, among others (for more information, see: http://www.mygfsi.com/certification/recognised-certification-programmes.html).

It was only around 2007 that major retailers like Tesco, Walmart and Metro started actively accepting GFSI benchmarked food safety certification programs, and ever since, SQF, as one of the benchmarked programs, has been growing in global certified sites, especially in the United States and the rest of North America.

Before GFSI gained acceptance, multiple buyers used to audit the same supplier that was providing similar products and services to each of them. Different retailers had different standards, and the audit process was not objectively carried out by a third-party certifying body that would be accredited by a reliable organization:
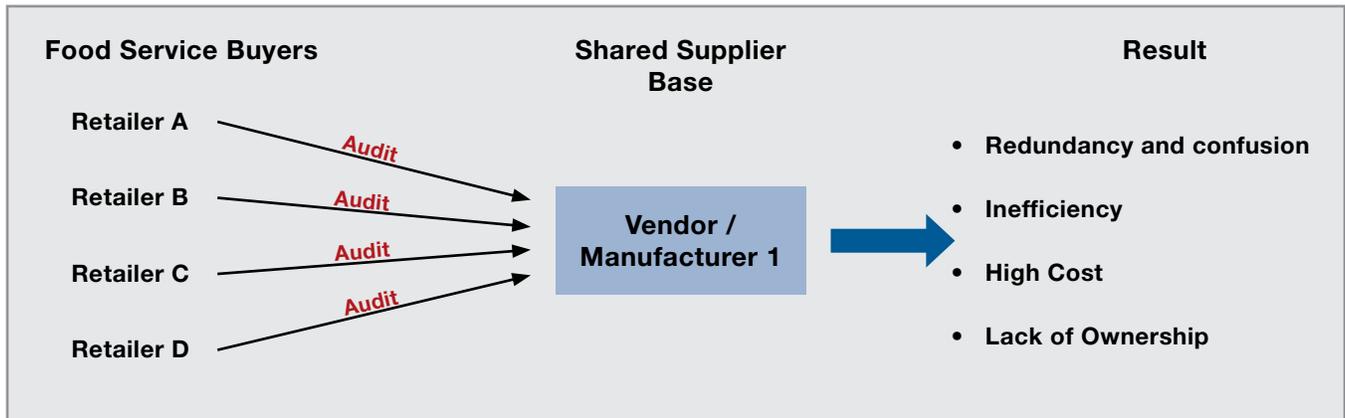
Adapted from: SQF Information Day, 2017

When GFSI benchmarked programs gained prominence in the market, it streamlined the process, benefitting both suppliers and buyers. With it, if suppliers were certified against any of the mentioned accredited GFSI benchmarked food safety standard (such as the SQF) within the industry scope, they would be recognized by a buyer or retailer anywhere, globally:
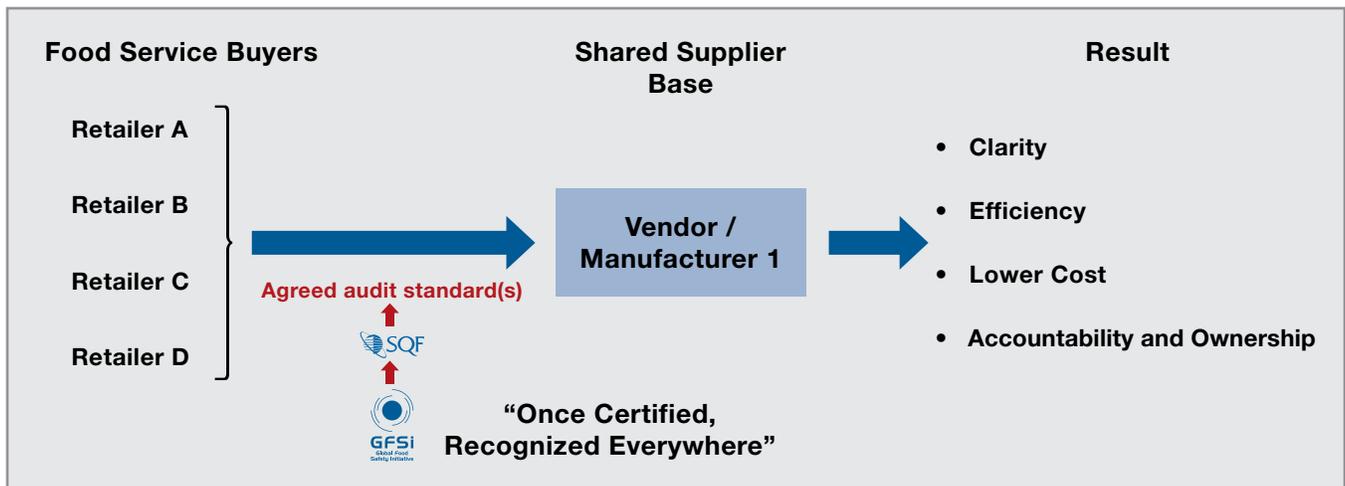
Adapted from: SQF Information Day, 2017

FOCUS ON HYGIENE AND SANITATION

Food-related outbreaks and recalls due to poor sanitation and hygiene standards prevailing in the food industry is not an uncommon occurrence around the globe, including the United States. According to the Centers for Disease Control and Prevention, every year there are about 48 million foodborne illnesses, 128,000 hospitalizations, and 3,000 deaths due to consumption of contaminated food. These incidences result into annual losses of over $ 15.6 billion dollars to the economy. Moreover, about 1 in 4 of the food safety recalls in the US relate to poor environmental hygiene and sanitation controls, and, if food facilities were to implement appropriate improvements, it could translate into an actual savings of $ .5 – 1.5 million annually per company. Establishing such food safety controls usually requires food facilities to develop, implement, and maintain a food safety management system, and the SQF Codes can provide a sound basis for developing such a system.

The *SQF Code Edition 8 Food Safety Code for Manufacturing* has provided the requirements for environmental hygiene and sanitation controls for the food and beverage industry, at least in the following areas (Note: Technical elements for Module 11 are referenced in the following points):

1. The Concept of Hygienic Design

Element 11.2.9.3 of the *SQF Food Safety Code for Manufacturing* states that "benches, tables, conveyors, mixers, mincers, graders and other mechanical processing equipment shall be hygienically designed and located for appropriate cleaning."

Hygienically designed surfaces generally have the following quality features: are cleanable to a safe microbiological level; are made of compatible (corrosion-resistant, non-toxic, non-absorbent) material; are accessible for inspection, maintenance, cleaning, and sanitation; allow for no product or fluid collection; have hollow areas that are hermetically sealed; have no niches like cracks, seams, gaps etc.; exhibit sanitary operational performance; have valves, switches, and other maintenance enclosures designed to prevent any harborage points; have hygienic compatibility with other systems such as the water pipe supply etc.; and there has to be a validated cleaning protocol for each piece of processing equipment.

Hygienically designed equipment is quicker and easier to clean, and minimizes the risk of product contamination by microorganisms, allergens, foreign material, etc. This in turn maximizes food safety and quality, reduces the risk of an expensive product rejection or recall, and minimizes food waste.

However, when it comes to the implements used to clean food production equipment, very few of these cleaning tools are developed with good hygienic design in mind. Cleaning equipment can be a major collection point for pathogens. Therefore, cleaning implements of poor design could jeopardize food safety and quality. Vikan's Ultra Safe Technology (UST) brushes and brooms can provide a facility with a superior hygienic cleaning solution. *For more information, download our white paper at:* www.remcoproducts.com/ust-white-paper.

2. Verified and Validated Cleaning Processes

Element 11.2.13 requires sites to develop reliable cleaning and sanitation methods so it does not pose a chemical contamination risk to raw materials, ingredients or product.

A well-written cleaning program must also include provisions for effective cleaning of equipment, facilities, utensils, amenities, and external areas. Such a methodic program must be verified to ensure its effectiveness in terms of removing biological, chemical, and/or physical contaminants from equipment.

Moreover, any modifications to the equipment means that cleaning processes must be re-validated. In the case of a cleaning implement such as a scrubbing brush, this may involve development of a consistently effective and appropriate method of decontaminating the cleaning tool. *For more information, download our white paper at:* http://remcoproducts.com/cleaning-tool-maintenance/.
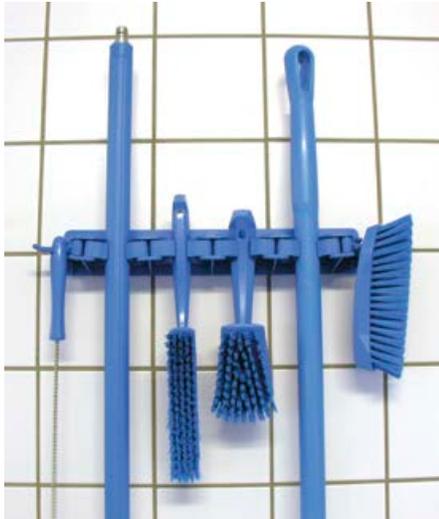
3. Care, Maintenance, and Assurance of Sanitary Performance of Equipment

Element 11.2.9 requires the site to document appropriate specifications of equipment and utensils. Equipment must be designed, constructed, installed, operated, and maintained to meet applicable regulatory requirements, and not pose a contamination threat to the product. Furthermore, they must be cleaned after use or at a frequency to control contamination, and be stored in a clean and serviceable condition to prevent microbiological contamination or allergen cross-contact incidences. As a recommendation, there should also be scheduled care and maintenance plan for the cleaning tools because they may be a potential source of food contamination.

For more information, download our white paper at:
http://remcoproducts.com/white-paper-selection-care-and-maintenance-guide/.

4. Significance of Sanitary Zones and Environmental Monitoring

The purpose of creating sanitary zones is to ensure **separation of functions** critical to food safety to prevent direct contamination, cross contact, and cross contamination incidents. The requirements are provided in section 11.7, which provides guidance on:

11.7.1 Process Flow

11.7.2 Receipt of Raw and Packaging Materials and Ingredients

11.7.3 Thawing of Food

11.7.4 High Risk Processes

11.7.5 Control of Foreign Material Contamination

11.7.6 Detection of Foreign Objects

11.7.7 Managing Foreign Matter Contamination Incidents

Proper placement of zones improves capability of environmental monitoring necessary to verify whether sanitary conditions are maintained on-site. Such zoning can best be supported by a well developed and implemented color-coding program.

For more information, download our white paper at:
http://remcoproducts.com/white-paper-making-the-decision-to-apply-color-coding/.

SIGNIFICANT CHANGES IN SQF EDITION 8 CODES

Edition 8 is a recently updated SQF version that meets the benchmarking requirements laid out in the latest GFSI Guidance Document v.7.1@ (published in April 27, 2017). The new edition is now principally covered in seven SQF codes as listed below:

SQF Code Edition 8	Description	Formerly (in SQF 7.2) as:
Food Safety Fundamentals	Applies to ALL facilities. It also functions as an entry-level food safety code for small developing businesses, and will not be GFSI benchmarked.	Level 1
Primary Production	HACCP-based food safety code for farms and ranches. Submitted for GFSI benchmarking.	Level 2
Food Safety for Manufacturing	HACCP-based food safety code for food manufacturers. GFSI benchmarked.	Level 2
Food Packaging	HACCP-based food safety code for food packaging manufacturers. GFSI benchmarked.	Level 2
Storage and Distribution	HACCP-based food safety code for warehouse and distribution centers. GFSI benchmarked.	Level 2
Food Retail	HACCP-based food safety code for restaurants and retail outlets. GFSI benchmarked.	Level 2
Quality Code	Contain Quality elements. The site must first be certified to the applicable Food Safety Code for the relevant sector category. It is not GFSI benchmarked as a stand-alone program.	Level 3

Each SQF Code covers the following information:

- Part A on 'Implementing and Maintaining the SQF Code'
- Scope, References, and Definitions
- SQF **System Elements** for the SQF Code – these cover food safety system requirements
- SQF **Modules** for the SQF Code – the modules contain *technical elements* specific for a food sector
- Appendices related to the SQF Codes

For example: The **SQF Food Safety Code for Manufacturing** applies specifically to Food Sector Categories 4, 7-22, 25, and 31-34, and covers the following applicable Technical Elements: Module 3 (GMP for Animal Feed Production), Module 4 (GMP for Pet Food), Module 9 (GMP for pre-processing of Animal Products), Module 10 (GMP for pre-processing of Plant Products), and Module 11 (GMP for Food Manufacturing).

Remember, the facility needs to define their products and the scope of their activity, which should assist them in choosing the relevant SQF Code that applies to their site. So, if a processing facility is dealing with bakery and snack operations (covered in the Food Safety Category or FSC 13), it must consider System Elements listed in *SQF Food Safety Code for Manufacturing*, and Technical Elements of Module 11 on "GMP for processing of food products."

SQF System Elements for Food Manufacturing are:

2.1 Management Commitment
2.2 Document Control and Records
2.3 Specification and Product Development
2.4 Food Safety System
2.5 SQF System Verification
2.6 Product Identification, Trace, Withdrawal and Recall
2.7 Food Defense and Food Fraud
2.8 Allergen Management
2.9 Training

Keeping in line, principally, with the transition to the new GFSI requirements, there have been some significant changes in SQF Edition 8 Food Safety Code for Manufacturing (when compared with 7.2):

Significant Changes in Part A - Implementing & Maintaining SQ Ed. 8 Food Safety Code for Manufacturing Changes:

(i) Part A of the SQF Code for Food Manufacturing applies to human food, pet food and animal feed manufacturing only.

(ii) All major and minor non-conformances must be corrected within 30 days.

(iii) Voluntary unannounced audits are now recognized on the certificate.

(iv) Withdrawn sites are required to wait for 12 months before reapplying for certification.

(v) Surveillance audit following suspension is now termed as an on-site audit and is unannounced.

Significant Changes in SQF Ed. 8 Food Safety Code for Manufacturing Changes:

(i) Senior management must take responsibility for training and communication, and have at least monthly follow-up meetings with the SQF Practitioner on matters of food safety and quality.

(ii) The CODEX HACCP Plan requirements are more detailed and require applicable regulatory controls essential for the country of manufacture, and the country of destination, if known.

(iii) Wider Environmental Monitoring Controls are required for manufacturing sites, based on risk, except for storage and distribution facilities.

(iv) Robust Approved Supplier Programs are required with added provisions on supplier verifications.

(v) Added clarity on sections for managing allergens, training personnel, and on labeling requirements.

Significant Changes in Module 11 – GMP for Food Processing:

(i) Design of conveyance systems that carry steam or water (e.g. ducting, pipes) must be such that it prevents contamination of food, ingredients, and food contact surfaces.

(ii) Specifications for equipment, utensils, and protective clothing must be documented.

(iii)Provision for temporary repairs must be included in the cleaning program. There has to be a plan in place for permanent repairs.

(iv)Modifications to CIP equipment requires re-validation of its cleaning processes.

(v) Compressed air or other gases that contact food or food contact surfaces must be clean, and present no risk to food safety.

(vi)An effective storage plan for safe, hygienic storage of all raw materials, ingredients, packaging, equipment, and chemicals is now required.

KEY-ELEMENT	Technical Sub-Elements of Module 11	Focus on Sanitation and Hygiene
11.1 **Site Location and Construction**	*11.1.1 premises location and approval*	Most pertinent comment is that "safe and hygienic operations" must not be interfered with (11.1.1.1).
11.2 **Construction of Premises and Equipment**	*11.2.1 materials and surfaces;* *11.2.2 floors, drains, and waste traps;* *11.2.3 walls, partitions, doors, and ceilings;* *11.2.4 stairs, catwalks, and platforms;* *11.2.5 lightings and light fittings;* *11.2.6 inspection/QC area;* *11.2.7 dust, insect, and pest proofing;* *11.2.8 ventilation;* *11.2.9 equipment, utensils, and protective coating;* *11.2.10 premises and equipment maintenance;* *11.2.11 calibration;* *11.2.12 pest-prevention;* *11.2.13 cleaning and sanitation*	In these sub-elements, various food and non-food contact surfaces & areas are mentioned. Sections on equipment and utensils, and, on cleaning and sanitation, are the most relevant. Some of the key points here are: Materials and surfaces for the construction of the premises and equipment must not pose a food safety risk. Routine maintenance and repair of the premises and equipment must minimize incidences of product contamination. Provisions for effective cleaning of processing equipment, utensils, and protective clothing must be met.

KEY-ELEMENT	Technical Sub-Elements of Module 11	Focus on Sanitation and Hygiene
11.3 Personnel Hygiene and Welfare	*11.3.1 personnel;* *11.3.2 hand washing;* *11.3.3 clothing;* *11.3.4 jewelry and personal effects;* *11.3.5 visitors;* *11.3.6 staff amenities;* *11.3.7 change rooms;* *11.3.8 laundry;* *11.3.9 sanitary facilities;* *11.3.10 lunch rooms*	These elements relate to the good hygiene practices of workers, and the maintenance of sanitary conditions of their work environment. Incidences of direct contamination of food by personnel can be significantly minimized by measures like hand-washing and wearing gloves, aprons, and gowns. This prevents the transfer of human pathogens to food products.
11.4 Personnel Processing Practices	*11.4.1 staff engaged in food handling & processing operations*	Good Manufacturing Practices such as on personnel hygiene, are covered here.
11.5 Water, Ice and Air Supply	*11.5.1 water supply;* *11.5.2 water treatment;* *11.5.3 ice supply;* *11.5.4 monitoring water microbiological quality;* *11.5.5 the quality of air and other gases*	Water, ice, air, and other gases must be of acceptable quality, and their conveyance systems must be of appropriate sanitary design.
11.6 Storage and Transport	*11.6.1 storage and handling of goods;* *11.6.2 cold storage, freezing, and chilling of foods;* *11.6.3 storage of dry ingredients, packaging, and shelf-stable packaged goods;* *11.6.4 storage of hazardous chemicals and toxic substances;* *11.6.5 loading, transport, and unloading practices;* *11.6.6 loading;* *11.6.7 transport;* *11.6.8 unloading*	These programs allow for safe and hygienic receipt, storage, handling, movement, and transportation of raw materials, ingredients, packaging materials, in-process and finished products, equipment, and chemicals. The elements cover handling of different types of foods such as frozen, chilled, or ambient, and measures taken to prevent cross-contamination.

KEY-ELEMENT	Technical Sub-Elements of Module 11	Focus on Sanitation and Hygiene
11.7 Separation of Functions	11.7.1 process flow; 11.7.2 receipt of raw and packaging materials and ingredients; 11.7.3 thawing of food; 11.7.4 high-risk processes 11.7.5 control of foreign matter contamination; 11.7.6 detection of foreign objects; 11.7.7 managing foreign matter contamination incidents	Some important points are as follows: Process flow is designed to prevent or minimize potential for contamination. High-risk processes must be serviced by qualified and trained staff employees. There must be proper detection and management of foreign contamination.
11.8 Onsite Laboratories	11.8.1 location	In-house laboratories must be in a hygienic environment and be kept clean and tidy, as these conditions contribute to the maintenance of a sterile environment required for product and other types of lab testing, such as chemical and microbiological analysis.
11.9 Waste Disposal	11.9.1 dry and liquid waste disposal	This element forms an essential part of daily hygiene inspections. Disposal methods must not pose any actual or potential food safety risk to the final product. Edible and inedible wastes are separated, and appropriate regulatory guidelines must be followed.
11.10 Exterior	11.10.1 grounds and roadways	The immediate vicinity of the facility (i.e. outside grounds) must at least be kept in a sanitary condition so that it reasonably will not pose a potential risk to food safety and quality.

HOW TO PREPARE FOR SQF CERTIFICATION

Although SQF Ed. 8 took effect January 2, 2018, here are the steps to follow to be prepared:

1. Download from the SQFI website (http://www.sqfi.com/documents/):

    a. The applicable versions of SQF Edition 8 Code.
    b. The applicable versions of the SQF Edition 8: Summary of Changes Documents.
    c. The applicable SQF Edition 8 Guidance Documents and Checklists.

2. Train your entire staff in the relevant SQF code, and allocate an SQF Practitioner. You may also consider attending SQF conferences and webinars, or getting guidance from SQF consultants and food safety experts.

3. Identify and document the gaps in your food safety and quality programs using the updated checklist, and work towards documentation and on-site compliance.

4. Conduct a self-audit or schedule a pre-assessment audit by registering in the SQFI Assessment Database.

5. Book your certification audit at least 3-4 months before you want the audit to take place to allow for delays in the process (assuming that your facility's existing SQF certification will still be valid).

HOW CAN REMCO PRODUCTS HELP YOU?

Remco Products Corporation, your partners in hygiene, have been serving our clients in the food and beverage sector for over 30 years. We provide exceptional material handling and cleaning supplies that are used in food processing sanitation programs and industrial cleaning applications where hygiene and safety requirements are critical.

We can assist you in complying with SQF Edition 8 Certification requirements:

- Download our white papers and read our articles at the Remco Knowledge Center, http://remcoproducts.com/knowledge-center/.

- Browse through our Remco Products categories at: http://products.remcoproducts.com/.

- If you require any technical assistance and additional information about our products and services, kindly contact us at cs@remcoproducts.com.

SELECTED REFERENCES:

GFSI: www.mygfsi.com/certification/overview.html

Grocery Manufacturers Association. (2011). Capturing recall costs. Measuring and recovering the losses. *The Association of Food, Beverage and Consumer Products Companies*.

SQF Information Day (2017) Peeking into the Future of Food Safety. August 2017

SQFI website: www.sqfi.com/documents

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ABOUT REMCO

Remco provides color-coded tools for cleaning and material handling where hygiene and safety are critical. The introduction of a food-safe poly shovel more than 30 years ago established Remco as an industry pioneer of hygienic design. In addition to its hygienic shovels, scoops, and scrapers, Remco features Vikan's advanced line of brushes, brooms, and squeegees. Together with Vikan, Remco supports color-coding plans by offering more tools in more colors than any other supplier. Remco also provides training and support to end users, helping ensure regulatory compliance. Regardless of an operation's size or complexity, Remco has the tools and expertise to help execute HACCP color-coding plans.