

General Guidance for Developing, Documenting, Implementing, Maintaining, and Auditing an SQF System-Storage and Distribution

Module 12: Good Distribution Practices for Storage and Distribution of Food Products

SQF Code, Edition 8.1

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Preface

This document provides general guidance for SQF sites, consultants and auditors when implementing and auditing module 12 of the SQF Food Safety Code for Storage and Distribution, edition 8.1, here in referred to as SQF Code, and can be used where no specific industry sector guidance is available.

The purpose of SQF Code implementation is not only to achieve certification, but to assure constant and continual validation and review of a site's SQF System for currency and completeness.

Effective implementation of the SQF Code requires the commitment of the site management and the constant involvement and participation of site staff to maintain the safety of SQF certified products. The results of effective SQF implementation are not only the protection of public health and company brands, but real improvement in margins by reduction of waste, recalls and withdrawals, and improved productivity through "doing it right the first time."

The SQF Institute is grateful to the SQF Institute Technical Advisory Council and SQF stakeholders for their assistance in reviewing and contributing to this document.

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Section 1. Introduction

1.1 Purpose of the Guidance Documents

The purpose of this series of SQF Guidance Documents is to assist sites with designing, developing, documenting, implementing and maintaining an SQF System using the SQF Code and to assist SQF registered auditors in auditing the SQF Code.

The relevant Code version number is identified in the document header. Terms used in these documents are defined in Appendix 2: Glossary.

Guidance is intended to support the SQF Code but does not replace it. It is not an auditable document, nor is it definitive and applicable in every situation. Sites, consultants, and auditors are required to understand the food safety risks in a given industry sector and are able to apply the SQF Code to effectively control those risks.

1.2 Layout of the SQF Code

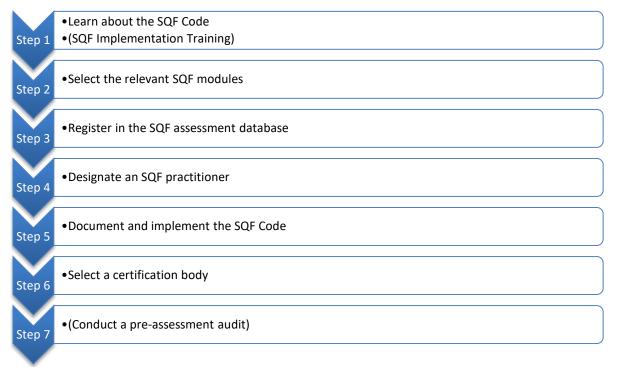
The SQF Code consists of two parts and four appendices. Part A contains the criteria for implementing and maintaining the SQF Code. Part B, the heart of the SQF Code, is made up of modules. Within each module are clauses or elements, which the site must implement as their SQF System. In module 2, the clauses encompass the system elements. Each element outlines where procedures need to be documented, where record keeping is required or where actions must be taken. Module 12 is the Good Distribution Practices (/GDP) requirements applicable to the storage and distribution food industry sector. Sites must meet the requirements of the module that are applicable to their operation.

The four appendices in the SQF Code provide additional information needed to implement an SQF System:

- Appendix 1: SQF Food Sector Categories
- Appendix 2: Glossary of Terms
- Appendix 3: SQF Logo Rules of Use
- Appendix 4: Requirements for SQF Multi-site Certification

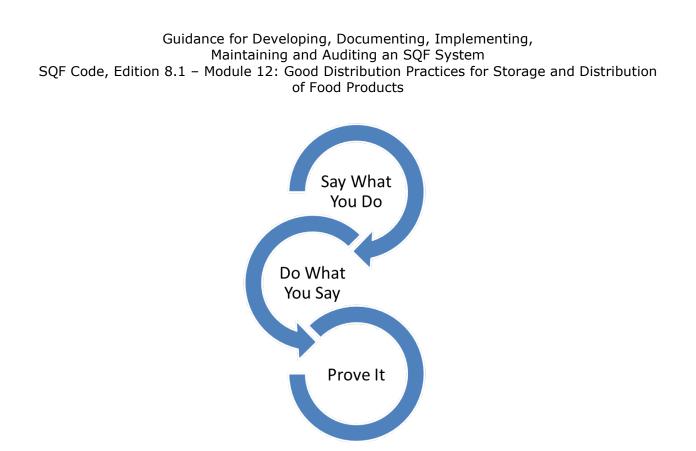
Section 2. The SQF Certification Process

The steps for the process of preparing for SQF certification are shown below. Optional steps or other options are indicated in parenthesis. This process is outlined in section 1 of Part A of the SQF Code, 8^{th} edition.



Section 3. The SQF Implementation Process

To achieve SQF certification, the site must document and implement the relevant modules of the SQF Code. It's also important to provide evidence of the System in the form of documents and records. The implementation process is shown below.



Document the SQF System – prepare policies, procedures, work instructions and specifications that address the relevant modules of the SQF Code. In other words "say what you do."

Implement the SQF System – put into place the prepared policies, procedures, work instructions and specifications. In other words, "do what you say."

Provide records the SQF System – keep records to demonstrate compliance to the relevant modules of the SQF Code. These records provide evidence of the function and control of the System. In other words, "prove it."

Section 4. Introduction to This Guide

1. Purpose and Scope of This Guide

The purpose of SQF Guidance Documents is to assist sites with designing, developing, documenting, implementing and maintaining an SQF System using the SQF Code and to assist SQF registered auditors in auditing the SQF Code.

The relevant Code version number is identified in the document header. Terms used in this document are defined in Appendix 2: Glossary of the SQF Code.

This particular guide covers the requirements of *Module 12: Food Safety Fundamentals– Good Distribution Practices for Storage and Distribution of Food Products.* It covers the Good Distribution Practices requirements for the receipt, storage, display, consolidation and distribution of fresh produce and general food lines.

Sites implementing this module must also meet the requirements of *Module 2: SQF System Elements*. Module 2 guidance is a separate document and sites are advised to understand the System Elements, e.g., the requirements of Module 2 before addressing Module 12.

Applicable food sector categories (FSCs) for Module 12 are:

FSC 26: Food storage and distribution

Guidance is intended to support the SQF Code but does not replace it. It is not an auditable document, nor is it definitive and applicable in every situation. Sites, consultants, and auditors are required to understand the food safety risks in a given industry sector and are able to apply the SQF Code to effectively control those risks.

2. The Structure of the SQF Code, Edition 8

The SQF Code is a process and product certification standard that uses Hazard Analysis Critical Control Points (HACCP) as its foundation. HACCP is a food safety management system based on the principles defined in either:

- The CODEX Alimentarius Commission HACCP principles and guidelines, or
- The National Advisory Committee on Microbiological Criteria for Food (NACMCF)

The main feature of the SQF Code is its emphasis on the systematic application of HACCP to identify, monitor and control food safety hazards in the process flow and to manage identified food safety risks.

This guide references the HACCP (Hazard Analysis and Critical Control Point) technique but does not explain the HACCP method in any detail. It requires that those implementing and auditing an SQF System to have completed HACCP training as defined in *Appendix 2: Glossary* of the SQF Code and have extensive knowledge of the HACCP guidelines of either of the above documents, the application of the HACCP principles and experience in implementing HACCP systems. It is not meant to deliver prescribed, absolute rules for implementation, but to be utilized by sites, SQF consultants and SQF auditors as recommendations on practical applications for implementation and certification of the SQF Code.

The SQF Code also recognizes that food safety practices differ depending on the food safety risk to the product or process and has designed the Code to meet the requirements of food storage and distribution sector. The modules 2 & 12 that apply to the following Food Sector Category:

SQF Food Safety Code for Storage and Distribution			
FSC	Category	Applicable GDP Modules	
26	Food storage and distribution	Module 12: GDP for Storage and Distribution of Food Products	

This guidance document describes the requirements of Module 12, which applies to GDP requirements for most distribution centers.

3. The Structure of Module 12

An SQF System is a risk management system documented and implemented by the site of food (or related) products to control food safety risks using the SQF Code. It can be audited and certified by an SQF licensed certification body.

The process of how to document and implement the SQF Code and achieve SQF certification can be found in the most current version of Part A of the code.

Module 2 defines the core elements of the SQF Code that provide protection and assurance and are required to be implemented by all sites seeking SQF certification. It forms the foundation of the site's SQF System. It includes the commitment of site management to maintain a safe food supply and the management processes that must be in place to do so; the HACCP plan(s) that identify and control hazards; product traceability and recall; and other foods requiring identity preservation; and staff training requirements.

Module 12 expands on element 2.4.2.1 of the system elements (module 2) and details the specific GDP requirements for distribution centers.

Module 2

2.4.2.1 The site shall ensure the Good Distribution Practices described in module 12 of this Food Safety Code are applied, or exempted according to a written risk analysis outlining the justification for exemption or evidence of the effectiveness of alternative control measures to ensure that food safety is not compromised.

Module 12

- 12.1 Site Location and Construction
- 12.2 Construction of Premises and Equipment
- 12.3 Personnel Hygiene and Welfare
- 12.4 Personnel Processing Practices
- 12.5 Water, Ice and Air Supply
- 12.6 Storage and Transport
- 12.7 Separation of Functions
- 12.8 Waste Disposal
- 12.9 Exterior

It is recognized that not all elements of module 12 are applicable to all storage and distribution facilities. Some elements can be exempted if they are not relevant, and as long as the site has submitted a written request to the certification body prior to the audit, to exclude that element.

There are no mandatory elements in module 12.

4. The Format of the Module 12 Guidance

The following section explains the elements and sub-elements of module 12 and provides guidance on what a site needs to do to develop, document and implement module 12 requirements, and provides information on what the auditor may be looking for to confirm compliance.

The following format is used throughout:

Element Number and Name

Sub-element Number and Name.

This section will describe what the SQF Code requires for module 12. This is the text from the SQF Code and is the auditable standard. Where there is disagreement between the text of the SQF Code and the guidance, the SQF Code in English prevails.

Implementation Guidance

What does it mean?

This will include the interpretative comments of what the sub-element requires or definitions of the terms used.

What do I have to do?

This will include suggestions of what is required to be done by the site to document and implement this subelement. The information provided is not considered exhaustive and may not apply in every situation. It is meant to provide guidance and interpretation.

Auditing Guidance

This will include suggestions of what the auditor may seek as evidence of compliance for this sub-element. The information provided is not exhaustive and may not apply in every situation.

Section 5. Guidance for Good Distribution Practices for Storage and Distribution of Food Practices (GFSI J II)

This module covers the Good Distribution Practices requirements for the storage and distribution of food products. Sites implementing this module must also meet the requirements of Module 2 - SQF System Elements for Storage and Distribution.

All applicable elements of Module 12 shall be implemented. Where an element is not applicable a request for exemption must be appropriately justified and submitted to the certification body in writing before the audit.

Implementation Guidance

Food and beverage products intended for human consumption through manufacturing, retail or food service operations and handled through a distribution center, shall be received, stored, consolidated and distributed in a safe and efficient manner. In order to accomplish this, distribution center premises shall be designed to facilitate proper and safe operations. Module 12 outlines the general requirements for the construction of premises and equipment in which food handled, stored and/or transported with guidance on each aspect provided to assist in understanding various requirements. It also details some of the fundamental practices that must be in place to protect the safety of food.

While the SQF requirements for Module 12 are "shall do...," meaning the element MUST be accomplished, where applicable to the site's specific operation, element 2.4.2.1 provides a method to seek exemption, provided the exemption is supported by a risk analysis. It is the site's responsibility to develop and present this risk analysis outlining justification for exemption or evidence of the effectiveness of alternate control measures to the certification body and/or SQF auditor for review when questioned.

12.1 Site Location and Construction

12.1.1 Premises Location and Approval

What the SQF Code says

12.1.1.1 The location of the premises shall be such that adjacent and adjoining buildings, operations and land use do not interfere with safe and hygienic operations.

12.1.2.1 The construction and ongoing operation of the premises on the site shall be approved by the relevant authority.

12.1.1 Implementation Guidance

What does it mean?

The location and construction of the premises are such that neighboring buildings, farms, or factories do not introduce factors that could adversely affect the safety of food (e.g., spray drift from neighboring farms, air-borne pollutants from adjacent factories, etc.).

In most jurisdictions, the building and operation of the premises is governed by local, state, and/or federal regulations. The site must be familiar with the applicable regulations and ensure that relevant permits, approvals and notifications are in place.

What do I have to do?

The site must ensure the premises and its surroundings are kept free of contaminants to the products from the external environment. The site shall maintain structures, instructions, procedures, etc. that verifies the control of external environmental conditions and for the safety of the process and/or product produced if applicable.

For storage and distribution facilities, measures may include protection of products or materials from air-borne contaminants from neighboring facilities. Measures may also include physical barriers, sealed factories, positive air pressure, etc.

Sites must check with local authorities to establish the requirements. However, plans and specifications submitted to a local authority for approval may include:

- Locality map showing the site in relation to the area;
- Site plan showing all salient features of the site and a description of adjoining sites including the location of the premises north compass points, roads, storm water, waste water;
- Floor plans showing the layout of the premises, operations areas, permanent fixtures, and layout of equipment;
- Details of major items of equipment used in the operations;
- A diagram of product/process flow;
- Specifications generally include details of construction materials, surface finishes (walls, floors, ceilings, etc.), product contact surfaces, essential services and the number of personnel;
- All applicable certificates or inspection documents from local, state, federal or international governing agency shall be current and kept on file.

12.1.1 Auditing Guidance

Any applicable documented protection measures shall be reviewed initially at the desk audit. However, compliance to this requirement shall be reviewed by observation of adjacent facilities and land use and interviews with operational staff at each site audit. Evidence may include:

- Investigation of external environment and surrounding land-use to determine risk;
- Understanding of the site to the risk from the external environment;
- Physical measures in place to manage exterior environmental risks;
- Procedural measures in place to manage exterior environmental risks;
- The measures are effective in managing the exterior environmental risk.

The auditor shall be familiar with the regulatory requirements applicable to the site and check the certificates and inspection documents from the government agency.

To determine compliance, the auditor must walk around the site, inside and out to determine if there are any outside factors that would impact the certified product. This would include potential threats from neighboring facilities or other environmental conditions.

12.2 Construction of Premises and Equipment

12.2.1 Materials and Surfaces

What the SQF Code says

12.2.1.1 In warehouses where food products are recouped or exposed, product contact surfaces shall be constructed of materials that will not contribute a food safety.

12.2.1 Implementation Guidance

What does it mean?

The construction of the material and surfaces used at the site shall be constructed in a way that would be easily cleanable and prevent contamination to products or the process.

What do I have to do?

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The main feature of an acceptable product contact surface is that it is impervious, non-corrodible, smooth, easy to clean, light colored, nontoxic and impact resistant. Stainless steel, aluminum, hot-dipped galvanized steel, fiberglass, polyvinyl chloride and nylon are examples of approved product contact surfaces. All other surfaces must be capable of being kept clean and preferably light colored.

Documentation of product contact surfaces being in good condition can be accomplished by making this item a part of a monthly facilities checklist or other type of check list.

12.2.1 Auditing Guidance

Compliance to this requirement shall be reviewed at each site audit by interviews, observations and reviews of records. Evidence may include:

- Knowledge of local, state, and federal regulations on the construction and operation of food premises;
- The site has been approved by relevant authorities for construction;
- The site is approved by relevant authorities for storage and distribution of the applicable products;
- Approval has been sought and given for changes to facilities or equipment.

12.2.2 Floors, Drains and Waste Traps

What the SQF Code says

12.2.2.1 Floors shall be constructed of smooth, dense impact resistant material that can be effectively graded, drained, impervious to liquid and easily cleaned.

12.2.2.2 Drains shall be constructed and located so they can be easily cleaned and not present a hazard. Drains if located in storage and handling areas, shall be maintained in a clean manner.

12.2.2.3 Waste trap system shall be located away from any food handling or storage area or entrance to the premises.

12.2.2 Implementation Guidance

What does it mean?

Floors, drains and waste traps shall be designed and constructed in such a way as to minimize the risk to product or process safety.

What do I have to do?

Drains shall be easily accessible for cleaning. Grates need to be removable for access and cleaning. Practices must be demonstrated by the site to assess the risks to products and to control those identified food safety risks.

Documentation of floor materials shall be included in the site plan or description of the premises and product handling area. Floors shall be provided with proper drainage. Drains need to be positioned and constructed to allow the effective removal of overflow or waste water under normal working conditions. Where drainage and gradients are not ideal, a written SOP shall address the timely and effective removal of waste water to a drain.

12.2.2 Auditing Guidance

Compliance to this requirement shall be reviewed at each site audit primarily through observations. Evidence may include:

- Floors are smooth and easy to clean;
- Floors are correctly graded to allow for water run-off;

- Floors are made of appropriate, smooth, dense, impact-resistant material;
- There are no areas of water pooling or build-up;
- Procedures are in place to deal with floor areas that are not correctly designed or constructed;
- Drain locations do not pose a safety risk;
- Drain construction does not pose a safety risk;
- Waste traps are located away from food handling areas or entrances to the site.

12.2.3 Walls, Partitions, Doors and Ceilings

What the SQF Code says

12.2.3.1 Walls, partitions, ceilings and doors shall be of durable construction. Internal surfaces shall be smooth and impervious and shall be kept clean (refer to 12.2.11.1)

12.2.3.2 Wall to wall and wall to floor junctions shall be designed to be easily cleaned and sealed to prevent the accumulation of food debris.

12.2.3.3 Doors shall be of solid construction; and windows shall be made of shatterproof glass or similar material.

12.2.3.4 Drop ceilings shall be additionally constructed to enable monitoring for pest activity, facilitate cleaning and provide access to utilities.

12.2.3 Implementation Guidance

What does it mean?

This clause is concerned with the design, construction and condition of the buildings that contain storage and distribution operations, specifically the floors, partitions, doors and ceilings. They must be designed and constructed in such a way as to minimize the risk to product safety and in some instances to offer protection to the product. The extent to which these elements are relevant will depend on the type of processes housed and whether the product is enclosed or exposed.

What do I have to do?

Walls, partitions, doors and ceilings need to be described in the site plan. Ceiling design and construction must not pose a threat of product contamination. Wall-to-ceiling, wall-to-wall and wall-to-floor junctions must be sealed and easy to clean.

Walls, partitions, doors and ceilings must be kept clean as per the cleaning and sanitation program (see 12.2.11).

Today's food premises design generally excludes windows in operational areas. However, older sites may have glass windows. The site must, as part of their foreign matter control program, identify any windows that could pose a hazard to unpackaged or exposed product if shattered. Windows away from the immediate product handling or staging areas are generally not recognized as posing a hazard to products being handled. Windows close to product handling and staging areas and skylights that are located immediately above such areas can pose a hazard. Such windows must be constructed of shatterproof material or otherwise covered to prevent glass or plastic fragments from entering product or packaging. Window ledges need to be sloped downwards for ease of cleaning and to prevent their use for unwanted storage of utensils or other materials.

Doors routinely subjected to water must be of solid construction, impact-resistant, non-corrosive materials preferably with a smooth, light colored surface. Doors between operational rooms used to transport product needs to be protected against damage by crates, trolleys, folk lifts or similar traffic.

For efficiency and ease of cleaning, walls with cement render and smooth-finish glazed tiles, fabricated insulated panels or similar materials are examples of acceptable surfaces. Where light colored finishes do not exist, a written Standard Operating Procedure (SOP) shall address the timely and effective inspection of the adequacy of cleaning and resultant corrective actions when discrepancies are noted.

It is recommended that if light colored finishes do not exist, an inspection shall be included in the internal audit and/or cleaning sanitation schedule. Where floor junctions in facilities are not rounded to enable easy cleaning and prevent the build-up of waste, a written SOP shall address the cleaning protocol to meet acceptable hygienic standards for these areas.

Service ducting, conduit and pipes ideally need to be recessed into walls or ceilings, suspended from ceilings, housed inside drop ceilings with vertical drops to their point of use, or mounted a sufficient distance from walls or ceilings. In other words, they should be constructed to avoid build-up of debris, prevent rodent runs and allow ease of cleaning. Where design does not provide for the avoidance of debris build up, the schedule of cleaning shall be frequent enough to minimize any build up.

Drop ceilings offer some advantages and disadvantages. They can provide a clean, smooth, impervious ceiling surface in the operational areas and an area for service (e.g. water, electricity) runs. However, they can also allow for an "out of sight, out of mind" mentality and can accumulate dust and provide harborage for pests. Drop ceilings, if used, must be checked and cleaned regularly (refer to 12.2.11).

Where drop ceilings are not used, cleaning regimes and inspections must check for dust on ledges, loose fittings, glass windows, light fittings, or other areas where dust can accumulate and fall onto product.

12.2.3 Auditing Guidance

Compliance to this requirement shall be reviewed at each site audit primarily though observation. Evidence may include:

- Walls and partitions are of sound construction and made of suitable materials;
- Doors are of sound construction for the volume and type of traffic;
- Ceilings are of sound construction and made of suitable materials;
- Walls, partitions, ceilings, and doors are kept clean;
- Where a drop ceiling is used, the area is kept clean and tidy;
- Service lines are designed and constructed for ease of cleaning;
- The condition of walls, partitions, doors, ceilings, does not pose a food safety risk.

12.2.4 Lightings and Light Fittings

What the SQF Code says

12.2.4.1 Lighting in warehouses where food product is recouped or exposed shall be of appropriate intensity to enable the staff to carry out their tasks efficiently and effectively.

12.2.4.2 Light fittings in areas where food product is recouped or exposed shall be shatterproof, manufactured with a shatterproof covering or fitted with protective covers and recessed into or fitted flush with the ceiling.

12.2.4.3 Light fittings in other areas where product is protected shall be designed such as to prevent breakage and product contamination.

12.2.4 Implementation Guidance

What does it mean?

Adequate light intensity is required for operations, cleaning and inspection tasks. However, the design and construction of lighting can pose a risk to product due to breakage or dust accumulation.

What do I have to do?

Lighting shall provide minimum lux (foot candle) intensity as prescribed by applicable legislation or in their absence, meet Good Distribution Best Practices appropriate to the product being handling. In general, operations areas are illuminated to a minimum intensity of 200 lux (18.58 ft.c.). Inspection or recoup areas require higher illumination; 500 lux (46.45 ft.c.) is generally recommended.

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Light fittings in operational areas are required to be fitted with protective covers or have shatterproof lights installed. Documentation needs to be kept on file and is to include specifications from the manufacturer with a description of the product. An acceptable practice is to recess the light into the ceiling, where possible or have it fitted flush to the ceiling. Where light fittings are not able to be recessed, they must be protected from accidental damage. In circumstances where light fittings are suspended from cables, the top of the fitting needs to be sloped at an angle that permits easy cleaning. Exposed light fittings must be included in a cleaning and sanitation schedule (refer to 12.2.11).

12.2.4 Auditing Guidance

Compliance to this requirement shall be reviewed at each site audit primarily through observation. Evidence may include:

- Lighting intensity is sufficient in operational areas;
- Lighting intensity is sufficient at inspection and recoup areas;
- Light fixtures are shatterproof or protected, and pose no threat to product safety;
- Light fittings are intact there is no sign of breakage; and
- Light fittings are clean and part of a regular cleaning regime.

12.2.5 Dust, Insect and Pest Proofing

What the SQF Code says

12.2.5.1 All external windows, ventilation openings, doors and other openings shall be effectively sealed when closed and proofed against dust, vermin and other pests.

12.2.5.2 Personnel access doors shall be provided. They shall be effectively insect-proofed and fitted with a self-closing device and proper seals to protect against entry of dust, vermin and other pests.

12.2.5.3 Inspections for pest activity shall be undertaken on a regular basis by trained personnel and the appropriate action taken if pests are present.

12.2.5.4 Electric insect control devices, pheromone or other traps and baits shall be located so as not to present a contamination risk to product, packaging, containers or equipment. Poison rodenticide bait shall not be used inside food storage areas.

12.2.5 Implementation Guidance

What does it mean?

This element is closely related to *12.2.10 Pest Prevention*. This element provides the requirements for physical barriers to pest and dust entry into operational areas via external doors, windows or other means. It also covers the location and use of control measures to trap pests within the premises.

What do I have to do?

The site should consider the risk to entry of dust, insects and pest through external doors and by lighting location. A documented risk assessment for external door opening should be conducted to determine if a double set of doors is required. Additionally, a risk assessment for internal and external light should be conducted to determine if they adversely attract inspects.

Doors opening directly into operational areas must be effectively sealed to prevent dust and/or entry of pests.

Doors used for personnel access shall be self-closing unless used exclusively as a fire exit.

All pest devices used must be approved and used per applicable legislation so as not to present a contamination risk to the products or equipment.

In 12.2.10.4, "bait" refers to poison baits or glue boards. Indicator baits that conform to local regulations may be used inside operational areas.

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12.2.5 Auditing Guidance

Compliance to this requirement shall be reviewed at each site audit primarily through observation, and records of pest activity (refer to 12.2.10). Evidence may include:

- Windows are closed or protected and sealed against dust or pests;
- Doors are closed or adequately protected against dust or pests;
- Personnel doors have self-closing devices or other method to ensure effective protection;
- External doors are adequately fly-proofed;
- Sealing around trucks in docking areas and dock levelers is adequate;
- Insect devices are located so as not to pose a threat to products or equipment;
- Poison baits or glue boards are not used in operational areas.

12.2.6 Ventilation

What the SQF Code says

12.2.6.1 Adequate ventilation shall be provided in enclosed storage and food handling areas.

12.2.6.2 All ventilation equipment and devices in the product storage and handling areas shall be adequately cleaned as per 12.2.11.

12.2.6 Implementation Guidance

What does it mean?

Poor ventilation can result in condensate build-up in areas where temperature extremes from hot to cold occur and can result in contamination due to condensate dripping onto product or product contact surfaces.

What do I have to do?

Ventilation in enclosed product handling areas must meet applicable design and construction regulation and prevent condensation over product and surfaces of product contact equipment. Vents and exhausts must be screened to prevent entry of flying insects (see 12.2.5).

Ventilation equipment such as floor fans, overheard fans, wall mounted exhaust or intake fans must be on the master cleaning schedule and cleaned to avoid build of dirt and debris that could be blown onto products and product contact equipment.

12.2.6 Auditing Guidance

Compliance to this requirement shall be reviewed at each site audit primarily through observation and interview. Evidence may include:

- Operational, recoup and repacking areas have adequate ventilation;
- There is no condensation present over product or product contact surfaces;
- Exhaust vents are adequately fly-proofed; and
- Ventilation equipment is adequately cleaned, does not contain excess dust and debris and is included on master cleaning schedules.

12.2.7 Equipment, Utensils and Protective Clothing

What the SQF Code says

12.2.7.1 Equipment and utensils shall be designed, constructed, installed, operated and maintained so as not to pose a contamination threat to products.

12.2.7.2 Protective clothing in areas where food product is recouped or exposed shall be manufactured from material that is not liable to contaminate food and easily cleaned.

12.2.7.3 In areas where food product is recouped or exposed, racks shall be provided for the temporary storage of protective clothing when staff leaves the processing area and shall be provided in close proximity or adjacent to the personnel access doorways and hand washing facilities.

12.2.7 Implementation Guidance

What does it mean?

This is a general provision covering the condition and use of equipment, including utensils, benches, tables, bins, containers and protective clothing, so that they do not pose a threat to product safety. An approval and installation/operational process should include reference to food safety aspects of concern. Maintenance requirements for equipment and utensils are included in 12.2.8.

Clothing can also be a source of contamination and the design and materials used can also contribute to food safety issues.

What do I have to do?

Equipment shall be designed, constructed and maintained in accordance with the manufacturer and/or industry standards. Metal frames, supports and brackets supporting sinks, wash basins, benches, tables and shelves are generally constructed of solid materials such as hot dipped galvanized iron, stainless steel or aluminium and securely fixed to the walls or on metal frames. Equipment shall be smooth-finished, free from angles, ledges and crevices and easy to clean. The open ends of tubular legs or rails must be sealed to prevent the accumulation of dirt, debris or water.

Containers (e.g., tubs, bins, etc.) used for product storage or reusable shipping must be clearly identified (i.e., color-coded or labelled). Containers previously used for pesticides, insecticides or other deleterious materials must not be re-used for product handling. Corrugated containers can be only be used for one-way shipping and does not make use of previously used product containers.

Where protective clothing (e.g., gloves, face shields, etc.) is provided and used, it must be made of a material that is food-safe and is easily cleaned. There must be a cleaning regime in place for protective clothing (see 12.3.3)

Price should not be the only factor when purchasing equipment, utensils and protective clothing. Site's need to consider the role of the new item and choose the right item to do the job.

Written specifications are to be developed that includes the detailed description or features of the item. The goal of the specification is to outline all the technical details and requirements that the site has in mind for the purchased item. These can be included in purchase orders or requests for quotation.

Some things that may be considered for the specification document may include, but is not exclusive to the following:

- What is needed for the equipment and how the equipment will be used;
- Specific features, capabilities, or construction materials that are needed for that equipment;
- Durability of the item;
- Regulatory requirements;
- Manufactured and designed for use in a food handling site;
- Any required certifications or approvals (i.e., NSF, UL);
- Ease and use of cleaning;
- A receiving document to verify delivery and installation instructions;

- The type of power source;
- Quantity needed;
- Plumbing needs;
- Drainage requirements;
- Special options or features (ventilation, etc.);
- Service or maintenance requirements;
- Warranty;
- Energy rating;
- Freight and delivery requirements;
- Tear down and installation requirements; and
- Cleaning limitations or requirements.

Written procedures for the purchasing of equipment are also to be developed. This procedure is to outline the process in which equipment is identified, purchased and installed on the site. The procedure will assist in the purchasing decisions and choosing the right equipment to handle the required task. Some things that may be considered for the purchasing procedure may include, but not inclusive to the following:

- Regulatory requirements;
- The conditions and requirements when purchasing refurbished equipment;
- Members that are to be on the purchasing committee such as QA, sanitation, engineering; maintenance, etc.
- Conditions; and
- Confirmation from equipment vendors on acceptance of specification prior to manufacturing, modification or repair and confirmation of any installation specifications that may affect food safety.

12.2.7 Auditing Guidance

This element shall be reviewed at each site audit through observation and interview with operational staff. Evidence may include:

- Equipment is properly designed and maintained;
- Product contact utensils are properly designed and maintained;
- Containers of all types and uses are correctly labeled;
- Waste water and overflow from tanks and tubs is properly drained (see also 12.2.2);
- ° Protective clothing is provided that is fit for purpose;
- Protective clothing is provided that is made of material that will not contaminate products and is easily cleaned;
- ° There is a cleaning process in place for protective clothing;
- Properly designed racks are provided for protective clothing;
- ° Protective clothing is stored in an area accessible to staff.

12.2.8 Premises and Equipment Maintenance

What the SQF Code says

12.2.8.1 The methods and responsibility for the maintenance and repair of plant, equipment and buildings shall be documented, planned and implemented in a manner that minimizes the risk of product, packaging or equipment contamination.

12.2.8.2 Routine maintenance of site and equipment in any food storage area shall be performed according to a maintenance-control schedule and recorded.

The maintenance schedule shall be prepared to cover building, equipment and other areas of the premises critical to the maintenance of product safety.

12.2.8.3 Failures of site and equipment in any storage area shall be documented, reviewed and their repair incorporated into the maintenance control schedule.

12.2.8.4 Maintenance staff and contractors shall comply with the site's personnel and process hygiene requirements (refer to 12.3.1, 12.3.2, 12.3.3, 12.3.4).

12.2.8.5 All maintenance and other engineering contractors required to work on site shall be trained in the site's food safety and hygiene procedures and shall be assessed in their understanding before entering into any food storage areas.

12.2.8.6 Facility supervisors shall be notified when maintenance or repairs are to be undertaken in any food processing, handling or storage area.

12.2.8.7 The maintenance supervisor and the facility supervisor shall be informed if any repairs or maintenance pose a potential threat to product safety (i.e. pieces of electrical wire, damaged light fittings, and loose overhead fittings). When possible, maintenance is to be conducted outside operating times.

12.2.8.8 Temporary repairs, where required shall not pose a food safety risk. They shall exclude the use of fasteners such are wire or tape, are clearly identified and dated and included on cleaning programs. There shall be a plan in place to address final completion of temporary repairs in order to ensure temporary repairs do not become permanent solutions.

12.2.8.9 Maintenance staff and contractors shall remove all tools and debris from any maintenance activity once it has been completed and inform the area supervisor and maintenance supervisor so appropriate hygiene and sanitation can be completed prior to the commencement of site operations.

12.2.8.10 Paint used in a food handling or contact zone shall be suitable for use and in good condition and shall not be used on any product contact surface.

12.2.8 Implementation Guidance

What does it mean?

Maintenance activities – both planned and breakdown – can have a major impact on food safety, if not effectively implemented. Maintenance procedures must be carefully planned, designed, documented and implemented to avoid contamination of product, materials or equipment and to ensure that maintenance staff, including contractors, have an understanding of the safety implications of maintenance activities.

What do I have to do?

The protocol must outline that maintenance staff and service contractors engaged to complete work in operational areas must observe all personnel and maintenance specific hygiene requirements. Service contractors must be provided with protective clothing, as required. The procedures must describe the practices under which repairs are to be completed in any operational areas including the following requirements that maintenance staff must observe:

- Maintenance of equipment or building structures must be completed in a manner that does not pose a risk to the products or equipment;
- The maintenance supervisors must ensure they are notified by all contractors engaged to complete work in any operational areas. They must ensure that all service contractors are aware of the site's personnel hygiene requirements and that they are provided with any necessary

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protective clothing, or that protective clothing meets the same requirements as those of the sites staff;

- Maintenance staff and service contractors must ensure that they account for and remove all tools and debris from any maintenance activity once it has been completed in any operational area and inform the area supervisor so appropriate sanitation can be completed;
- Service contractors are to inform the maintenance supervisor if any required work poses a potential threat to product or equipment safety (i.e., pieces of electrical wire, damaged light fittings, loose fittings overhead, etc.). When necessary, maintenance must be conducted outside operational times;
- Service contractors shall notify the maintenance supervisor in the event of any breakage or damage that could expose products or equipment to contamination;
- Service contractors must notify the maintenance supervisor when work has been completed;
- Facility supervisors and operators must ensure appropriate and effective clean up measures are taken once all maintenance or service contractor activity is completed and prior to the commencement of facility operations.

It is essential that the site's staff, maintenance personnel and service contractors adhere to the correct procedures when completing maintenance on all equipment. As part of maintenance procedures, repaired equipment must be inspected for missing parts (nuts, bolts, springs, etc.) prior to use.

Those responsible for reporting and completing repairs and cleaning the equipment after repairs must be specified in maintenance procedures.

The use of temporary fasteners such as string, wire or tape is not permitted unless they are properly documented and included in any cleaning activities.

Where machinery that exists over product contact surfaces requires lubrication, only food grade lubricant is to be used. Even then, food-grade lubricant is still a quality hazard and must be used sparingly to avoid contact with product.

Where paint is used on equipment, roofs, walls or floors, it must be in good condition and suitable for use. Paint must not be used on product contact surfaces.

12.2.8 Auditing Guidance

Maintenance schedules and procedures shall be reviewed at the initial desk audit. Subsequently, compliance to this requirement and the site maintenance schedule and procedures shall be reviewed at each site audit through observation, review of records and interview with operational, maintenance staff and contractors. Evidence may include:

- There is a planned maintenance schedule;
- The maintenance schedule includes critical equipment and areas of the site;
- There are maintenance procedures that include food safety issues;
- The planned maintenance schedule is being followed;
- Maintenance procedures afford no risk to product safety and integrity;
- Maintenance procedures are known by maintenance personnel and contractors;
- Maintenance procedures are being followed;
- Maintenance procedures include food safety and hygiene practices;
- Maintenance staff follow food safety and hygiene practices;
- Maintenance contractors follow food safety and hygiene practices;
- Preventative maintenance activities are documented;
- Facility and equipment failures are documented;

- The maintenance schedule is adjusted for facility and equipment failures;
- Operating staff and supervisors are notified when repairs are made/completed;
- All tools, parts and debris are removed from repair areas;
- Sanitation activity occurs after maintenance repair in operational areas;
- Notification occurs when potential risk to product is evident through maintenance activities or breakdowns;
- Food grade lubricant is used in product contact zones, conveyors, and on all motors over product contact surfaces;
- Food grade lubricant is used sparingly and does not come into contact with food product, materials, or food contact surfaces;
- Paint is not used on product contact surfaces;
- Maintenance records are available and complete.

12.2.9 Calibration

What the SQF Code says

12.2.9.1 The methods and responsibility for the calibration and re-calibration of measuring, test and inspection equipment used for monitoring activities outlined in pre-requisite program, food safety plans and other process controls, or to demonstrate compliance with customer specifications shall be documented and implemented. Software used for such activities shall be validated as appropriate.

12.2.9.2 Procedures shall be documented and implemented to address the disposition of potentially affected products should measuring, test and inspection equipment be found to be out of calibration state.

12.2.9.3 Calibrated measuring, test and inspected equipment shall be protected from damage and unauthorized adjustment.

12.2.9.4 Equipment shall be calibrated against national or international reference standards and methods or to accuracy appropriate to its use. In cases where standards are not available, the site shall provide evidence to support the calibration reference method applied.

12.2.9.5 Calibration shall be performed according to regulatory requirements and/or to the equipment manufacturers recommended schedule.

12.2.9.6 Calibration records shall be maintained.

12.2.9 Implementation Guidance

What does it mean?

The accuracy of measuring, and inspection equipment that is used to test product parameters (e.g. temperature, weight) is essential in ensuring that product meets regulatory, legal and customer requirements. The measurement equipment itself must be tested to ensure correct information is provided to make operational decisions.

What do I have to do?

Test equipment used to confirm regulatory and customer requirements must be calibrated against a national or international standard.

In cases where a national or international standard does not exist or is not arranged, a reference standard can be purchased or created and/or a standard method (often supplied by the equipment supplier) used.

To ensure that measuring equipment gives reliable results, the site must:

- Identify all the equipment that requires calibration (e.g. scales, callipers, thermometers etc.);
- Ensure the equipment, once calibrated, is protected so that measurements remain accurate;

- Ensure the equipment is only operated by authorized personnel and using approved methods;
- Determine how accurate the measurements need to be and if the site need to comply with industry or national standards;
- Calibrate equipment regularly. The calibration frequency will vary depending upon the type of equipment and its usage. Calibration frequency must be adjusted in light of experience or manufacturer's instructions;
- Develop a procedure to address products produced between the time equipment is "out-ofcalibration" is discovered and the last calibration check with normal tolerances recorded.
- Clearly identify who is responsible for undertaking calibration, recording the results of all calibrations and labelling equipment to indicate when it was last calibrated and when recalibration is due.

12.2.9 Auditing Guidance

Calibration procedures shall be reviewed at the initial desk audit. Subsequently, compliance to this requirement and the site calibration procedures shall be reviewed at each site audit through observation, review of records and interviews with operational staff responsible for calibration. Evidence may include:

- All measuring, test and inspection equipment is identified;
- Calibration standards are known and followed;
- Calibration methods and frequency are documented for all available measuring, test, and inspection equipment;
- Calibration methods and frequency meet national or international standards where appropriate;
- Calibration methods and frequency meet customer requirements where appropriate;
- Calibration and/or validation methods and frequency meet manufacturer's instructions where appropriate;
- Methods for calibration of equipment include responsibility for conducting calibration;
- Authorized personnel understand the methods for conducting calibration;
- There are procedures in place to address disposition of potentially affected product;
- Potentially affected product is adequately disposed of;
- Calibrated equipment is protected from damage;
- Calibrated equipment is not subject to unauthorized adjustment;
- Calibration records are available and complete.

12.2.10 Pest Prevention

What the SQF Code says

12.2.10.1 The methods and responsibility for pest prevention shall be documented and effectively implemented. The premises, its surrounding areas, storage facilities, machinery and equipment shall be kept free of waste or accumulated debris so as not to attract pests and vermin.

12.2.10.2 Any identified pest activity shall not present a risk of contamination to food products or packaging.

12.2.10.3 Food products or packaging that is found to be contaminated by pest activity shall be effectively disposed of, and the source of pest infestation investigated and resolved.

12.2.10.4 The pest prevention program shall:

- i. Describe the methods and responsibility for the development, implementation and maintenance of the pest prevention program;
- ii. Record pest sightings and trend the frequency of pest activity to target pesticide applications;
- iii. Outline the methods used to prevent pest problems;
- iv. Outline the pest elimination methods;
- v. Outline the frequency with which pest status is to be checked;
- vi. Include on a site map the identification, location, number and type of bait stations set;
- vii. List the chemicals used (they are required to be approved by the relevant authority and their Safety Data Sheets (SDS) made available);
- viii. Outline the methods used to make staff aware of the bait control program and the measures to take when they come into contact with a bait station;
- ix. Outline the requirements for staff awareness and training in the use of pest and vermin control chemicals and baits; and
- x. Measure the effectiveness of the program to verify the elimination of applicable pests.

12.2.10.5 Inspections for pest activity shall be undertaken on a regular basis by trained personnel and the appropriate action taken if pests are present.

12.2.10.6 Records of all pest control applications shall be maintained.

12.2.10.7 Pesticides and other toxic chemicals shall be clearly labeled and stored as described in element 12.6.5 and handled and applied by properly trained personnel. They shall be used by or under the direct supervision of trained personnel with a thorough understanding of the hazards involved, including the potential for the contamination of food and food contact surfaces.

12.2.10.8 Pest control contractors shall be:

- i. Licensed and approved by the local relevant authority;
- ii. Use only trained and qualified operators who comply with regulatory requirements;
- iii. Use only approved chemicals;
- Provide a pest control management plan (refer to 2.3.3) which will include and maintain a site map indicating the location of bait stations and traps and other applicable pest control/monitoring devices;
- v. Report to a responsible authorized person on entering the premises and after the completion of inspections or treatments; and
- vi. Provide a written report of their findings and the inspections and treatments applied.

12.2.10.9 The site shall dispose of unused pest control chemicals and empty containers in accordance with regulatory requirements and ensure that:

- i. Empty chemical containers are not reused;
- ii. Empty containers are labeled, isolated and securely stored while awaiting collection; and
- iii. Unused and obsolete chemicals are stored under secure conditions while waiting authorized disposal by an approved vendor.

12.2.10 Implementation Guidance

What does it mean?

Pest prevention incorporates the site's integrated pest management (IPM) program as a holistic approach that integrates a range of practices to minimize the incidence of pest activity.

The Food and Agriculture Organization (FAO) of the United Nations defines IPM as "the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment."

In other words, a range of integrated measures are required to minimize pest populations, including mechanical preventions (e.g., sealed doors and windows, air curtains, etc.), mechanical controls (e.g., baits, traps, etc.), waste minimization, appropriate use of pesticides, etc.

This element covers primarily traditional pest management activities, including pesticide application. However, it is related to 12.2.5 Dust, Insect and Pest Proofing, which is also part of an overall IPM approach.

What do I have to do?

A fully maintained pest prevention program is essential to the safe function of any storage and distribution operation. The pest prevention program must:

• Record sightings and frequency of pest activity to identify the target pest (s) for each pesticide application;

- Outline the frequency with which pest status is to be checked;
- Identify the location of bait stations, traps and chemical sites for ease of checking;
- Outline the methods used to prevent pest problems (the recommendation is to be proactive);
- Outline the methods used when pests are found;
- Maintain licenses and credentials of the pest control operator (s);
- List the chemicals used;
- Assure chemicals used are approved by the relevant authority and that SDS are accessible; and
- Outline the requirements for staff awareness and training in the use of chemicals.

The location of internal and external pest control devices must be completed based on the risk to the site and the product. Factors that can affect this include product types, location of site, surrounding environment, types of facilities, external storage of equipment (such as equipment graveyards), neighboring facilities and land use. The site and surrounding areas must be kept free of waste, redundant equipment and associated debris to minimize harborage for vermin.

Pest control devices should be located at all product storage facilities in addition to the main operational facilities. Inspections for pest activity must take place on a regular basis, the results recorded and the actions taken if pests are present. This can be incorporated into the operation's internal audit program. The site should consider the effects of seasonal weather and conditions on the pest prevention program. The pest activity trends and other measurement shall be considered and, where appropriate, additional preventive activities may be required.

Examples of records of pest control applications include service reports, pesticide usage logs, pest sighting logs, corrective action reports and trending of activity by the service provider.

In addition to the pests most commonly seen in storage and distribution facilities (i.e., mice, rats, roaches, etc.), pest management procedures need to also consider and control domestic and feral animals and birds where applicable.

Any type of pest activity, including but not limited to flies, mice, vermin, insects, etc., identified within the site shall not pose a risk to the products or materials. Any products that have been found to be contaminated shall be disposed of according to the site's policy. All activity is to be documented with the records clearly identifying the results of the disposal, investigation and outcomes and resolution.

Personnel handling pest control chemicals must be trained and authorized to do so. Where external pest management contractors are used, they must be licensed by the relevant local authority and use only approved pest control chemicals. Chemicals must be stored appropriately and separate from any food materials or products (refer 11.6.4.1), and used chemical containers disposed of correctly.

12.2.10 Auditing Guidance

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Pest prevention procedures shall be reviewed at the initial desk audit. Subsequently, compliance to this requirement and the site's pest prevention procedures shall be reviewed at each site audit through observation, review of records and interviews with operational staff and possibly the pest contractor (if applicable). Evidence may include:

- The potential pests are known;
- There is a documented pest management program that integrates a number of preventative as well as control measures;
- The documented pest management program targets all known pests;
- The documented pest management program includes responsibilities for pest management;
- The documented pest management program targets includes methods to eliminate or minimize all known pests;
- The pest management program includes frequencies for checking pest status;
- The pest management program includes the exterior or surrounding areas of site;
- The methods, frequencies and responsibilities identified in the pest management program are effectively implemented;
- External areas are kept clear and free from waste and debris;
- There are no observed pest harborage areas observed within the site or in the immediate surrounds;
- There is a site map of pest control devices;
- Pest control devices meet regulatory requirements;
- There is a list of approved pest control chemicals;
- Only approved pest control chemicals are used;
- SDS sheets are available for all pest control chemicals;
- Pesticides are correctly labeled;
- Empty or redundant pest control chemical containers are correctly disposed of;
- Pest control contractors are trained, licensed and approved;
- Pest control inspections are thorough and conducted at the correct frequency;
- Site staff are aware of pest control devices;
- Appropriate corrective action is taken in response to pest control inspections;
- Pest control records are current and maintained.

12.2.11 Cleaning and Sanitation

What the SQF Code says

12.2.11.1 The methods and responsibility for the cleaning of the food handling and storage areas, staff amenities and toilet facilities shall be documented and implemented. Consideration shall be given to:

- i. What is to be cleaned;
- ii. How it is to be cleaned;
- iii. When it is to be cleaned;
- iv. Who is responsible for the cleaning; and
- v. The responsibility and methods used to verify the effectiveness of the cleaning and sanitation program.

12.2.11.2 Provision shall be made for the effective cleaning of processing equipment, utensils and protective clothing.

12.2.11.3 The responsibility and methods used to verify the effectiveness of the cleaning procedures shall be documented and implemented. A verification schedule shall be prepared.

12.2.11.4 Detergents and sanitizers that are used to clean, sanitize and maintain the facility shall be purchased in accordance with applicable legislation. The organization shall ensure:

- i. The site maintains a list of chemicals approved for use within the site;
- ii. An inventory of all chemicals purchased and used for cleaning and sanitation purposes shall be maintained;
- iii. Detergents and chemicals are stored as outlined in 12.6.5;
- iv. Safety Data Sheets (SDS) are provided for all detergents and sanitizers purchased;
- v. Only trained staff handles sanitizers and detergents;

12.2.11.5 Detergents and sanitizers that have been mixed for use shall be correctly mixed according to manufacturers' instructions, stored in containers that are suitable for use, and clearly identified. Mix concentrations shall be verified and records maintained.

12.2.11.6 The site shall dispose of unused detergents and sanitizers and empty containers in accordance with regulatory requirements and ensure that:

- i. Empty detergent and sanitizer containers are appropriately cleaned, treated and labeled before use;
- ii. Empty detergent and sanitizer containers are labeled, isolated and securely stored while awaiting collection; and
- iii. Unused and obsolete detergents and sanitizers are stored under secure conditions while waiting authorized disposal by an approved vendor.

12.2.11.7 A record of hygiene inspections, cleaning and sanitation activities, and verification activities shall be maintained.

12.2.11 Implementation Guidance

What does it mean?

Cleaning and sanitation methods will vary depending on the nature of the operation and the risk. This element covers cleaning and sanitation protocols but specifies the correct use and type of cleaning detergents, sanitizers (also referred to as disinfectants) and the requirement for post-clean inspections.

It is important to stress that, irrespective of the type of operation and risk, all storage and distribution facilities require an appropriate documented and implemented cleaning program. The program must be verified to ensure its effectiveness.

What do I have to do?

A written cleaning program shall be in place and fully implemented that includes provisions for effective cleaning of equipment, facilities, utensils, amenities and external areas. The cleaning program shall identify the what, how, when and who for every item of equipment and part of the site. Responsibilities shall be identified, including responsibility for the visual or test inspection, and the verification of cleaning methods.

For small items of equipment such as tools and knives, a wash area is recommended with sufficient hot and cold running water, a suitable detergent and sanitizer for cleaning and when necessary, suitable racks for draining/drying equipment, utensils, and protective clothing. These areas shall be identified and constructed so they do not present a hazard to other operations. Protective clothing racks provide temporary storage for gloves, aprons and other items when staff needs to leave the operational area for meals or other short breaks. Used disposable protective clothing must be immediately disposed of in an appropriate manner. Non-disposable protective clothing shall be cleaned according to the written procedures.

The cleaning and sanitation procedures shall include the following detail:

- List all the areas and equipment to be cleaned;
- The frequency for cleaning and sanitizing different areas of the premises and all associated equipment;
- A full description of the cleaning and sanitation procedures for each piece of equipment or area of the operation. This should include:
- Physically remove solid particles by sweeping or wiping;
- Apply a suitable detergent in the correct concentration to remove grease and other residues;
- Rinse off residues and detergent;
- Apply a suitable sanitizer in the correct concentration to reduce or eliminate microbiological contaminants if required;
- Rinse to remove residual sanitizer, if indicated on product label;
- Dry, as indicated, in a manner that will prevent recontamination.
- Ensure operators involved in cleaning, including contract cleaners, are fully trained in cleaning and sanitation procedures;
- Chemicals must be approved for use by the appropriate authority; maintain a Safety Data Sheet (SDS) for each chemical used. Describe the chemicals used, their dilution rate and method of application;
- Chemical cleaners and sanitizers must be used and stored in an approved manner;
- Evaluation of cleaning. Monitor the effectiveness of cleaning and keep records of all inspections implemented to verify the effectiveness of the cleaning program. This can include visual inspection after sanitation activity or prior to start-up;
- Maintain an inventory of chemicals purchased and used;
- Outline requirements for the disposal of unused compounds and empty containers in accordance with regulatory requirements.

Chemicals and sanitizers, used at the site, that are mixed to proper concentration levels shall be mixed according to the manufacture directions. Mixed chemical solutions shall be stored in appropriate containers that are labelled and clearly identified. Verification of the mixed concentration shall be verified and results shall be recorded.

Any corrective actions taken when inspection reveals a problem must be recorded.

12.2.11 Auditing Guidance

Cleaning and sanitation procedures and schedule shall be reviewed at the initial desk audit. Subsequent compliance to this requirement and the site cleaning and sanitation procedures shall be reviewed at each site audit through observation, review of records, and interviews with operational

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staff and cleaning contractors if applicable. Evidence may include: The site has an effective and appropriate cleaning program in place; All critical equipment and areas of the site are covered in the cleaning program: Cleaning methods include what is to be cleaned, how it is to be cleaned, frequency of cleaning and responsibility for cleaning; The cleaning program includes measures for verification of the effectiveness of sanitation: The cleaning of operational equipment is effective; The cleaning of utensils and protective clothing is effective: The cleaning of buildings, surrounds, and amenities is effective; Cleaning of utensils is carried out in an area separate from operations; Racks and areas for storing cleaned utensils are provided and appropriate; Pre-operational inspections are completed to ensure cleanliness; All critical areas of the site are included in pre-operational inspections; Personnel conducting pre-operational inspections are trained and qualified; A sanitation verification schedule is available: Methods are established for verification of sanitation; Responsibility is established for verification of sanitation; An inventory of purchased chemicals is available and is current; Detergents and sanitizers meet local regulatory requirements; SDS sheets are available for all cleaning chemicals purchased; Personnel handling cleaning chemicals are properly trained; Cleaning chemicals are disposed of as per regulatory requirements; Empty cleaning chemical containers are labeled and securely stored; Records of cleaning and sanitation activities are maintained and complete; Mixed concentration levels are to be mixed to manufacturer instructions, tested for verification and recorded. Records of hygiene inspections are maintained and complete.

12.3 Personnel Hygiene and Welfare

12.3.1 Personnel

What the SQF Code says

12.3.1.1 Personnel suffering from infectious diseases or are carriers of, any infectious disease are not permitted to work in the distribution center or in the transportation of food, and shall not engage in food handling operations, or be permitted access to storage areas where the product is exposed.

12.3.1.2 The site shall have measures in place to prevent contact of materials, ingredients, food packaging, food, or food contact surfaces from any bodily fluids from open wounds, coughing, sneezing, spitting, or any other means.

In the event of an injury which causes spillage of bodily fluid, properly trained employee shall ensure that all affected areas including handling and processing areas have been adequately cleaned and that all materials and products have been guarantined and disposed of.

12.3.1.3 Personnel with exposed cuts, sores or lesions shall not be engaged in handling exposed product or food contact surfaces. Minor cuts or abrasions on exposed parts of the body shall be covered with protective bandage, or an alternative suitable dressing.

12.3.1.4 Smoking, chewing, eating, or spitting is not permitted in any food handling or storage areas where the product is exposed. Drinking is permissible under conditions that prevent contamination or other food safety risks from occurring.

12.3.1 Implementation Guidance

What does it mean?

In many jurisdictions, personnel requirements applicable to food or food related facilities are covered by food safety legislation. Where this applies, the legislative requirements must underpin the requirements of 11.3.1. This element covers the basic personal hygiene requirement for working in a storage and distribution site.

What do I have to do?

Medical screening of staff and contractors must be undertaken to detect carriers of infectious diseases. Staff identified as carriers of infectious diseases are not to be permitted to handle materials or products.

Employees must be aware of risks to the products from the potential transmission of pathogens from ill employees. The site's employee hygiene plan will address both the prevention and control of product exposed to ill employees and bodily fluids. An example of a control program could be the removal of an employee from direct product contact to non-product contact activities when the employee reports potential illness or injury. Ideally, an employee will not be penalized for reporting illness to the site. This will be supported by introductory training with all employees on reporting illnesses and injury and a questionnaire on illnesses for visitors. Procedures and training will outline how to address exposure and contact of materials and product.

Staff with exposed cuts, sores or lesions are not permitted to handle products unless suitable protective coverings are applied. These coverings must be monitored regularly by responsible personnel to ensure they remain effective. Bandages are to be brightly colored to ensure they can be easily seen. Dressings on hands and fingers are required to be covered with a suitable glove.

Smoking, eating, chewing and drinking are not permitted in operational areas. A risk analysis for drinking water must be conducted and controls must be developed by the site to minimize the risk to the safety of the product if it is provided in an operational area. If water is consumed in an operational area, it is recommended that employees wash hands before returning to their station, or, at a minimum, hand sanitizer needs to be applied prior to returning to their work station, if permitted by regulation.

Where smoking, including electronic cigarettes, is allowed it should only be permitted in designated areas which shall be separate from production and storage areas and as per local regulations. Smoker's waste (e.g. butts) shall have appropriate containers for collection and be removed as per waste handling procedures (ref 12.8.1).

12.3.1 Auditing Guidance

Medical screening and personal hygiene policies and procedures shall be reviewed at the initial desk audit, and the effective implementation checked at each site audit though observation, review of records and interviews with staff. SQF auditors will question employees on hygiene practices to ensure they are understood and applied. Evidence may include:

- Medical screening and personal hygiene program, policies and procedures are in place;
- Medical screening and personal hygiene program, policies and procedures are effectively implemented;
- The policies and procedures for the prevention and control of bodily fluids are in place;
- The policies and procedures for the prevention and control of bodily fluids are effectively implemented;
- Employees notify the business of illness and injury according to policy;
- Personnel who are engaged in product handling and exhibit signs of illness are redeployed to low risk tasks;
- Personnel who are known to have been ill with an infectious illness are not involved in product handling;
- Personnel sores or cuts on hands are redeployed to low risk tasks or have cuts suitably bandaged and gloved;
- Bandages provided to staff are brightly covered;
- There is no smoking, eating or drinking in operational areas; and
- Drinking water in operational areas is in clear, covered containers, and stored in a designated area away from materials or equipment.

12.3.2 Hand Washing

What the SQF Code says

12.3.2.1 Hand wash basins shall be available and accessible as required.

12.3.2.2 Hand wash basins shall be constructed of stainless steel or similar non-corrosive material and as a minimum supplied with a potable water supply at an appropriate temperature, supplied with liquid soap contained within a fixed dispenser, with paper towels with a means of containing used paper towels. An effective hand dryer may be used in instances where there is no direct hand contact of food or food contact surfaces.

12.3.2.3 A sign instructing people to wash their hands, and in appropriate languages, shall be provided in a prominent position.

12.3.2.4 When gloves are used, personnel shall maintain the hand washing practices outlined above.

12.3.2 Implementation Guidance

What does it mean?

In all storage and distribution facilities, employees, contractors and visitors must have clean hands upon entering operational areas; after each visit to a toilet; after using a handkerchief; after smoking, eating or drinking; and after or contaminated material. Hand wash stations must therefore be correctly equipped and available at convenient locations for use.

What do I have to do?

Hand wash basins must be provided in close proximity to pedestrian entry points at each area of the site, with instructions for all staff, contractors and visitors to wash hands immediately before entering the operational area. Additional hand basins are required where hands could become contaminated prior to working with product.

Potable water at a suitable temperature, liquid soap, single-use paper towels and a means of disposing of used paper towels need to be provided at each station.

Where alternative methods of hand-drying are preferred (e.g., high-speed air dryers) they must be justified and their effectiveness validated (refer to 2.4.2.2 or 2.5.1.1).

Hand-wash basins are to be constructed of stainless steel or similar non-corrodible material. Hand-wash basins constructed of porcelain or similar materials must be located at a distance from operational areas.

12.3.2 Auditing Guidance

The location and construction of hand-wash stations and their use by staff, contractors and visitors shall be reviewed at each site audit. Evidence may include:

- Hand wash basins are available for staff, contractors, and visitors;
- Hand wash basins are located at personnel access points and areas where hands could become contaminated;
- Hand wash basins are constructed of an appropriate material;
- Hand wash basins have potable water supplied at appropriate temperatures;
- There is liquid soap available at hand wash stations;
- There are paper towels available at hand wash stations;
- There are containers for used paper towels at hand wash stations;
- There is signage near hand wash stations instructing people to wash their hands;
- Personnel in operational areas have clean hands;
- Personnel wash their hands on entering operational areas;
- Personnel wash their hands on leaving toilet areas;

- Personnel wash their hands on leaving the lunch room;
- Personnel wash their hands after handing products or waste;
- Personnel wash their hands after eating, drinking or smoking;
- Personnel who use gloves also follow hand washing requirements.

12.3.3 Clothing

What the SQF Code says

12.3.3.1 Clothing worn by staff shall be maintained, stored, laundered and worn so as not to present a contamination risk to product.

12.3.3.2 Clothing worn by staff engaged in handling food shall be maintained, stored, laundered and worn so as not to present a contamination risk to products.

12.3.3 Implementation Guidance

What does it mean?

Uniforms, including footwear and hair coverings that are provided to employees in storage and distribution sites, are primarily for the protection of products and product contact surfaces. However, buttons, snaps, pockets and the like can pose risk if the clothing item is not properly vetted, and head, face and body hair pose both potential biological and physical hazards that must be analyzed. Clothing must therefore be designed to prevent contamination and maintained in a clean and serviceable condition. A risk analysis will identify which items are appropriate for the personnel, product and process.

What do I have to do?

Employees and visitors must wear clean clothing, footwear, and hair covering, if identified as a risk, while in the operational area. The site must conduct a risk analysis to identify clothing needs and the risk posed by the clothing choices. Employees and visitors with excessively soiled clothing are not to handle products. Employees can wear uniforms off site provided they are properly cleaned at the beginning of their work operation.

Clothing includes outer garments such as work clothes, overalls, boots, shoe coverings, head coverings, hair nets, smocks, frocks, beard snoods and coats. When required, gloves and aprons shall be kept in an intact and sanitary condition when used. When not in use, gloves and aprons shall be stored in a designated area (e.g., such as a rack or in sealed containers within lockers), not on products or equipment.

Disposable gloves shall be removed before each break, changed upon re-entry into the operating area and when damaged. Employees must comply with hand washing practices even when gloves are used.

Any disposable clothing must be changed between breaks, upon entry into operational areas and when damaged. This includes aprons, frocks, smocks, boots, gloves, etc. When clothing is to be reused, it must be properly cleaned and stored on racks or hangers. It cannot be stored on boxes, product or equipment.

Hair restraints, hairnets and/or beard snoods are to be worn by employees who work around exposed product where required as per the risk assessment or customer requirements.

12.3.3 Auditing Guidance

Company choices for clothing, including uniforms, gloves, hairnets, snoods and footwear shall be based on a risk analysis and reviewed at the initial desk audit. Clothing worn by staff, contractors and visitors (where appropriate) shall be reviewed at each site audit through observation and interview. Evidence may include:

- A risk analysis has been conducted to determine clothing needs and choices;
- Company policies on clothing including uniforms, gloves, hairnets, snoods and footwear are in place and are appropriate for the type of operation;
- Company clothing policies are implemented by all staff;
- Clothing provided to staff is appropriate and properly maintained;

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- Clothing worn by staff is clean and changed when excessively soiled;
- Items such as hair nets, snoods and disposable gloves are available at accessible locations;
- Clothing requirements for contractors and visitors are followed:
- Disposable gloves and hairnets are correctly disposed of;
- Non-disposable gloves and/or aprons are properly cleaned between uses.

12.3.4 Jewelry and Personal Effects

What the SQF Code says

12.3.4.1 Jewelry and other loose objects shall not be worn or taken into any area where exposed food is recouped. The wearing of wedding rings and medical alert bracelets (plain bands with no stones) that cannot be removed can be permitted, however the site will need to consider their customer requirements and the applicable food legislation.

12.3.4 Implementation Guidance

What does it mean?

Loose pieces of jewelry can fall into exposed food products and cause a subsequent choking hazard. Also, pathogenic bacteria can multiply in the warm, humid areas under watchbands, rings and bracelets.

The application of the jewelry policy in storage and distribution facilities is therefore dependent on the risk to the product and exposure to the product.

What do I have to do?

Jewelry and other loose objects, including watches, worn or carried, must comply with local regulatory authority and proper employee hygiene practices. If such hand jewelry cannot be removed, it may be covered with material which can be maintained intact, in a clean and sanitary condition and which effectively protects against the contamination by these objects to the products or product contact surfaces.

Personal hygiene requirements should ensure that personnel in product handling and storage area do not wear perfume or aftershave.

Personnel engaged in any recoup, repack or exposed product areas should not be permitted to wear false fingernails, false eyelashes, eyelash extensions, long nails or fingernail polish.

Facilities can adjust their good employee hygiene practices based on customer requirements, risk to their product, product exposure and operational conditions. Compliance to all personal hygiene requirements are verified on a routine basis.

12.3.4 Auditing Guidance

As with clothing, company policies on jewelry shall be reviewed at the initial desk audit, and the implementation of that policy reviewed at each site audit through observation and interview. Evidence may include:

- The jewelry policy is appropriate to the risk, product exposure and operational conditions;
- The jewelry policy is effectively implemented for staff, contractors and visitors.

13.3.5 Visitors

What the SQF Code says

12.3.5.1 All visitors, including management and maintenance staff, shall wear suitable clothing and footwear when entering any food handling area.

12.3.5.2 All visitors shall be required to follow the GDPs outlined by the site.

12.3.5.3 Visitors exhibiting visible signs of illness shall be prevented from entering areas in which food is handled or exposed.

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12.3.5.4 Visitors shall enter and exit food handling areas through the proper staff entrance points and comply with all hand washing and personal practice requirements.

12.3.5.5 Facility shall have a policy for how drivers are managed and designated driver areas are maintained to prevent contamination or other food safety risks.

12.3.5 Implementation Guidance

What does it mean?

A visitor is considered a non-employee of the company or site. Examples of visitors would be vendors, service providers, contractors, truck drivers, tours and guests. Some sites may define visitors to include anyone who does not work in the site, thus, corporate or personnel from other company owned DC's could be considered visitors.

Visitors pose the same risk to product safety as site staff and in some cases a greater risk because they may not understand the operation or food hygiene requirements.

What do I have to do?

The requirements for visitors in storage and distribution facilities is dependent on the risk to the product, exposure to the product and the proximity of visitors to the products. In areas where product is exposed, visitors must follow the same provisions as staff.

The site shall have specific good hygiene practices for visitors, contractors and tours; have a means to communicate those expectations to visitors, contractors and tours; and monitor visitors, contractors and tours to ensure all visitors are in compliance with the company's good hygiene practices. All visitors must be suitably trained in hygiene policies prior to entering operational areas. If this is not possible or feasible, for example for short-term visits, visitors must be escorted while in those areas. All visitors are required to wear clean clothing and foot wear, and must remove jewelry and other loose objects, including watches that may fall into equipment or products.

Visitors shall enter and exit protected areas through designated staff entrance points and must comply with all hand washing and personal requirements. Visitors must not be permitted to handle any product or equipment unless they are a contracted service provider and it is in the scope of their work.

Visitors shall sign in the visitor log and shall be accompanied at all times by a site employee. For their personal safety, as well as the security of the product and process, they cannot bypass any training or be unsupervised.

12.3.5 Auditing Guidance

The site policy on visitors shall be reviewed at the initial desk audit and the implementation of that policy reviewed at each site audit through observation and interviews. As someone external to the site, the auditor will be able to partly ascertain compliance by their personal experience on entering the site. Evidence may include:

- The visitor policy is appropriate to the risk, product exposure and operational conditions and the type and number of visitors visiting the site;
- The visitor policy is effectively implemented for contractors, and visitors.

12.3.6 Staff Amenities

What the SQF Code says

12.3.6.1 Staff amenities supplied with appropriate lighting and ventilation shall be made available for the use of all persons engaged in the handling of product.

12.3.6 Implementation Guidance

What does it mean?

This is a header element, which leads to the further descriptions in 12.3.7 - 12.3.9 addressing change rooms, restrooms, and lunch rooms.

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What do I have to do?

Provide adequate lunchroom and restroom facilities, as appropriate for the number of employees in the operation based on applicable legislation relevant to the facility.

Provided amenities must have adequate lighting and ventilation.

12.3.6 Auditing Guidance

This element will be audited as part of each site audit through observation and interviews with operational staff. Evidence may include:

- Amenities are provided commensurate with the type of operation and the number of employees;
- Amenities are available for all employees who handle product;
- Staff amenities have adequate lighting;
- Staff amenities have adequate ventilation.

12.3.7 Change Rooms

What the SQF Code says

12.3.7.1 Facilities shall be provided to enable staff and visitors to change into and out of protective clothing as required.

12.3.7.2 Provisions shall be made for staff to store their personal items separate from food contact zones and food and packaging storage areas.

12.3.7 Implementation Guidance

What does it mean?

Provide a designated area (i.e., locker room) for employee and visitor garments and personal items.

What do I have to do?

Change rooms (i.e., locker rooms) must be provided with lockers for staff and visitors when they are required to change from street clothing to protective clothing to enter the facility. The areas shall be designed so materials and personal items cannot be stored on top of the lockers. The area around and under lockers if not fully sealed, must enable easy cleaning. It is generally recommended that lockers be fitted flush with the ceiling and placed on stands raised off the floor to allow for ease of cleaning.

12.3.7 Auditing Guidance

This element will be audited as part of each site audit through observation and interview with operational staff. Evidence may include:

- Change rooms are provided commensurate with the type of operation and the number of employees;
- Change rooms are designed to avoid storage on top of lockers, and ease of cleaning;
- There are facilities for staff to secure personal items.

12.3.8 Sanitary Facilities

What the SQF Code says

12.3.8.1 Toilet rooms shall be:

- i. Designed and constructed so that they are accessible to staff and separate from any food handling operations;
- ii. Accessed from the warehouse or product handling area via an airlock vented to the exterior or through an adjoining room;
- iii. Sufficient in number for the maximum number of staff;
- iv. Constructed so that they can be easily cleaned and maintained; and
- v. Kept clean and tidy.

12.3.8.2 Sanitary drainage shall not be connected to any other drains within the premises and shall be directed to a septic tank or a sewerage system. Procedure shall be documented and implemented to properly manage sewage back-ups in order to minimize the potential for contamination.

12.3.8.3 Hand wash basins shall be provided immediately outside or inside the toilet room and designed as outlined in 12.3.2.2.

12.3.8 Implementation Guidance

What does it mean?

Sufficient restrooms/toilets are required to accommodate the number of staff. Their location and design must be such that they do not cause a contamination risk to product, product contact surfaces, areas where product is exposed or to product handlers.

What do I have to do?

Restroom/toilet facilities must be located so that they do not open directly into the operational area. In existing facilities where they are in close proximity to areas where product is exposed, an airlock vented to the exterior must be maintained (negative pressure). Staff shall enter toilet rooms from operational areas through either an intervening change room or air lock which is ventilated to external air.

Where exhaust fans are fitted, they must be exhausted to the outside and not into a operational area. The light and exhaust fan can be inter-wired to create negative pressure as an option or the light and exhaust fan can be left on continuously.

To eliminate the risk of air flow from restrooms into the operational area, exhaust fan off-switches may be on timer delay. The light and exhaust fan may be on a single switch located on the outside of the restroom.

Separate toilet rooms shall be provided for each gender and are typically located adjacent to and separate from the change room. The number of toilet cubicles to be provided depends on the number of staff or is based on applicable legislation. Sites must be aware of local legislation, but as a guide:

Persons of the same sex	No. of bowls
1-15	1
16-35	2
36-55	3
56-80	4
>80 for each additional 30 persons	1

In male toilets, urinals can substitute for up to one-third of the total number of bowls.

Employee restrooms shall be properly equipped with hand wash facilities (refer 12.3.2). Hands-free taps are preferred as they improve sanitary conditions.

Signage may consist solely of icons (such as those published by the International Association for Food Protection) to accomplish these requirements, with exception of restroom signage, where other regulatory requirements must be applied.

Sanitary drainage must be kept separate from drainage from manufacturing areas.

12.3.8 Auditing Guidance

This element will be audited as part of each site audit through observation and interviews with operational staff. Evidence may include:

- There are sufficient toilets available for each gender and the number of employees;
- Toilets do not open directly into operational areas;
- Toilets can be easily cleaned;
- Toilets are clean and tidy;
- Sufficient hand wash basins are available near the toilets;
- Sanitary drainage is separated from operations site drains.

12.3.9 Lunch Rooms

What the SQF Code says

12.3.9.1 Separate lunch room facilities shall be provided away from a food handling or storage areas. Lunch rooms shall be kept clean and tidy and free from waste materials and pests.

12.3.9.2 Signage in appropriate languages advising people to wash their hands before entering the food storage areas shall be provided in a prominent position in lunch rooms and at lunch room exits.

12.3.9 Implementation Guidance

What does it mean?

Employees, contractors and visitors are not permitted to eat or drink in operational areas (refer to 12.3.1.4). Designated lunch rooms must therefore be available for staff to take breaks and eat meals. These areas must be physically separated from operational areas.

What do I have to do?

The site may provide additional outdoor lunchroom facilities (e.g., picnic tables) where they do not pose a dust or pest hazard to the operational area of the site. Covered facilities and sealed paths are one way to address these hazards. Where hazards presented by such facilities are minimal, the site may employ alternative controls such as routine cleaning of tables and steps to minimize dust on non-sealed paths.

Each site shall be equipped with a ventilated and well-lit lunch/break room for employees. The room must be equipped with a sink serviced with hot and cold potable water, a refrigerator and a microwave. The area must be kept clean.

12.3.9 Auditing Guidance

This element will be audited as part of each site audit through observation and interviews with operational staff. Evidence may include:

- Separate lunch facilities are provided;
- Lunch room facilities are adequate for the number of staff;
- Lunch facilities are separated from operational areas;
- Lunch room facilities are properly ventilated;
- Lunch room facilities are well lit;

- Lunch room facilities include a sink with hot and cold running water;
- Lunch room facilities are clean and tidy;
- Outdoor lunch facilities are maintained and/or designed to minimize risk to the facility;
- Proper heating or cooling facilities are provided in lunch facilities;
- Hand wash signage is available at the exit of the lunch facilities;
- Hand wash signage at the exit of lunch facilities is in appropriate languages.

12.4 Personnel Practices

12.4.1 Staff Engaged in Food Handling and Repac/Recoup Operations

What the SQF Code says

12.4.1.1 All personnel engaged in the direct handling of exposed food shall comply with the following practices:

- i. Personnel entry to food handling areas shall be through the personnel access doors only;
- ii. All doors are to be kept closed. Doors shall not be left open for extended periods when access for waste removal or stock transfer;
- iii. The wearing of false fingernails or fingernail polish is not permitted when handling food;
- iv. Materials and products shall be kept in appropriate containers as required and off the floor;
- v. Waste shall be contained in the bins identified for this purpose and removed from the processing area on a regular basis and not left to accumulate;
- vi. Staff shall not eat or taste any product in the food storage or handling area.

12.4.1.2 All personnel engaged in storage, transport and handling of packaged products and materials shall ensure that products and materials are handled and stored in such a way as to prevent damage or product contamination.

12.4.1 Implementation Guidance

What does it mean?

Proper product handling practices combined with sanitary conditions result in:

- Reduced risk of product contamination; and
- Fewer product returns or complaints.

While management has overall responsibility for ensuring that sanitary operational practices are adopted, and for establishing hygiene procedures, line operators and supervisors have a responsibility for ensuring these procedures are carried out properly and effectively.

What do I have to do?

Management must develop a list of good hygiene practices of "dos and don'ts." This list must be consistent with sections 12.3 and 12.4 of the SQF Code. This will be part of the documented procedures and work instructions. All staff, contractors, and visitors (where applicable) must be made aware of these requirements before entering the site.

The site shall have designated access points for personnel to enter and exit. Access points are defined as dock doors, pedestrian doors, office doors and any door that enters into the site from the outside. Doors that are opened for ventilation must be screened. All operational areas must have areas for employees to be able to wash their hands upon entry into such areas. Where repack or recoup product handling areas are not in enclosed rooms then personnel access requirements are applicable to the buildings in general.

Appropriate containers for waste storage are containers that are considered easily cleanable, properly labelled, not absorbable and designed for the purpose. No packaging container is to be used for the storage of waste or scrap. Waste containers are to be clearly labelled or designated as waste in languages relevant to the employee workforce. See also 12.8 for waste disposal requirements.

12.4.1 Auditing Guidance

Good hygiene practices will be reviewed as part of the initial desk audit. Subsequently, this element will be audited as part of each site audit through observation and interviews with operating personnel.

Evidence may include:

- Good hygiene practices have been developed;
- Staff are aware of the company's good hygiene practices;
- Staff adhere to the company's good hygiene practices;
- All exterior doors have protective controls in place;
- Hand wash stations are available at designated access points;
- Employees, contractors and visitors wash their hands at designated access points;
- Employees, contractors and visitors follow hygiene protocols;
- Employees are wearing hairnets in the designated areas;
- Products or materials are stored in appropriate containers and not on the floor;
- Waste containers are properly identified; and
- Waste is not left to accumulate in waste containers and is removed at appropriate intervals,

12.5 Water, Ice and Air Supply

12.5.1 Water Supply

What the SQF Code says

12.5.1.1 Adequate supplies of water drawn from a known clean source shall be provided for use during holding or storage and for cleaning the premises and equipment.

12.5.1.2 Supply of hot and cold water shall be provided as required to enable the effective cleaning of the premises and equipment.

12.5.1 Implementation Guidance

What does it mean?

Potable water supply at the correct temperature and pressure prescribed by applicable legislation must be of sufficient capacity for all scheduled production needs and meet cleaning and sanitation requirements (refer to 12.2.11).

What do I have to do?

Potable water, or drinking water, is water that is safe enough to be consumed by humans or used with low risk of harm. In most developed countries, sufficient quantities of potable water are delivered to storage and distribution facilities for operational purposes. In some countries however, and some regions in developed countries, the potability of municipal water cannot be relied on. The site must ensure the availability of sufficient supplies of water for personnel hygiene and cleaning purposes.

12.5.1 Auditing Guidance

This element will be audited as part of each site audit through observation, review of records and interviews with operational staff. Evidence may include:

- Water used in manufacturing is from a potable source;
- Potable water availability is adequate for operational needs;
- Potable water availability is adequate to meet cleaning requirements;
- Hot water is available for cleaning purposes.

12.5.2 Water Quality

What the SQF Code says

12.5.2.1 Microbiological analysis of the water and ice supply that is in contact with food or food contact surfaces shall be conducted to verify the cleanliness of the supply, the monitoring activities and the effectiveness of the treatment measures implemented.

12.5.2.2 Water and ice, that is contact with food or food contact surfaces, shall be analyzed using reference standards and methods.

12.5.2 Implementation Guidance

What does it mean?

Even though the water supply may come from the town or regional water supply in which the water is treated, safety tested and maintained by the local authority, it is required that storage and distribution facilities ensure their water at point of use complies with regulations.

Any water that is used in the operation that could come in contact with the product or for personnel hygiene purposes must be verified to be in compliance with local and national standards. In the US and Australia for example, the potability standard for drinking water is <1 coliform / 100 mL water and membrane filtration is the preferred method. However, standards also apply for *Salmonella* spp, *Shigella* spp, enterovirulent *E.coli, Vibrio cholera, Yersinia enterocolitica, Campylobacter jejuni*, and protozoa.

What do I have to do?

The site must be aware of the national and/or international potable water standards and any microbiological or chemical water standards imposed by customers. Monitoring and/or analysis can be conducted to ensure water continues to meet the required standard.

The monitoring may involve one or a number of the following:

- Regular testing of water (e.g., pH, turbidity);
- Checking filtration apparatus and changing it as required (refer to supplier specifications);
- Regular cleaning of water holding tanks and reservoirs;

The rate at which water is monitored or tested should, ideally, be based on risk, owing to the potential for seasonal variations in the supply, but at minimum, water quality should be monitored and assessed for compliance at least annually. This should include for potability and any additional quality or safety attribute. Utilize recognized guidance or hire a suitably qualified external resource to collect samples. When utilizing an outside laboratory, seeking a laboratory that is properly accredited to complete the desired analysis is required. The water must be retested any time the water source is changed or when equipment is added to treat or convey water within the site's water system.

Where the treatment of water occurs on-site, either prior to usage or as a treatment of waste water, the treatment needs to have applicable analysis verifying the efficiency of the treatment.

12.5.2 Auditing Guidance

Water testing procedures will be reviewed as part of the initial desk audit. Subsequently, this element will be audited as part of each site audit through observation, review of records and interviews with operating personnel. Evidence may include:

- There is a documented water testing procedure in place, including frequency and test method;
- Water is microbiologically tested to verify cleanliness of the supply and effectiveness of treatment methods;
- Appropriate standards are used to collect and analyze water;
- Where external laboratories are used, the laboratories are accredited to offer water testing services.

12.5.3 Water Delivery

What the SQF Code says

- 12.5.3.1 The delivery of water within the premises shall ensure potable water is not contaminated.
- 12.5.3.2 The use of non-potable water shall be controlled such that:
 - i. There is no cross contamination between potable and non-potable water lines;
 - ii. Non-potable water piping and outlets are clearly identified.

12.5.3 Implementation Guidance

What does it mean?

Water systems within a storage and distribution facility are designed to ensure delivery of potable water to its end use and purpose. The system is designed so there no possible points of cross contamination or back siphonage with non-potable water lines.

What do I have to do?

Water arriving at a storage and distribution facility is required to be potable or is immediately treated to reach and maintain potability. From this point on in the facility the water system needs to be designed and maintained in a manner that does not allow for any contamination of the water at any point in the system.

A water system blue print or schematic should be created from more detailed facility drawings so that it can be initially reviewed and aligned with the various activities and uses in the facilities. It should illustrate if there are any non-potable lines and is so that they are clearly labelled and do not have the ability to cross contaminate with potable water lines.

The schematic should also label where any back flow preventers or valves are located. Good designs should have these devices where hoses or other opportunities might provide for back siphonage if the right pressure differentials exist (e.g. sinks, wash down hose etc). Minimally and as per most local regulations a back flow valve would be installed at the point of entry to the facility. Permanent values should be checked annually by a licensed plumber and produce a record of such inspection. Some back flow values are intended to be replaced annually and this can be part of a preventive maintenance program (see 12.2.8)

12.5.3 Auditing Guidance

Water system schematics and any associated preventive maintenance can be included in the initial desk audit. Subsequently, this element will be audited as part of each site audit through observation, review of records and interviews with operating personnel. Evidence may include:

- Facility water system schematics are current and accurate;
- Backflow devices are illustrated, in place and maintained as appropriate;
- Non-potable water lines are properly labeled in the facility and on the schematic; and
- Records are available and current to support water system management.

12.5.4 Ice Supply

What the SQF Code says

12.5.4.1 Ice rooms and receptacles shall be constructed of materials as outlined in elements 12.2.1, 12.2.2 and 12.2.3 and designed to minimize contamination of the ice during storage and distribution.

12.5.4 Implementation Guidance

What does it mean?

Ice purchased or made for use on products in storage and distribution facilities needs to be stored in facilities or equipment that does not pose a risk of contamination to the ice and/or products being handled.

What do I have to do?

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Ice is commonly used on some vegetables and seafood to assist in maintaining the quality and/or safety of the products. Ice is these instances are aids to the storage and distribution process but can also be a source of contamination if it not made, stored and used such that it does not maintain its potability.

Ice that is purchased or manufactured on site must be either analysed or have a certificate of analysis to ensure it is potable as per 12.5.5. Upon receipt or production it must be stored in either receptacles (bins) or bagged and on pallets. These storage locations shall meet the same design, material and cleanliness requirements for food contact utensils and wall/floors as outlined in 12.2.3 and 12.2.7. Where bulk receptacles or bins are used they should be on the master cleaning scheduled and emptied and cleaned on a regular basis.

Ice making machines must also be designed and installed to ensure they can be routinely inspected and cleaned as they can be a source of microbial growth and contamination to ice being manufactured.

12.5.5 Auditing Guidance

Ice storage design and maintenance procedures is reviewed as part of the desk audit. Subsequently, this element will be audited as part of each site audit through observation, review of records and interviews with operating personnel. Evidence may include:

- Design specifications for ice making machines and/or receptacles or bins used to store bulk ice;
- Design and maintenance of storage room used to either produce bulk ice or store purchased and bagged ice;
- Cleaning schedules and records for ice machines and/or bins and receptacles.

12.5.5 Analysis

What the SQF Code says

12.5.5.1 Microbiological analysis of the water and ice supply that is in contact with food or food contact surfaces shall be conducted to verify the cleanliness of the supply, the monitoring activities and the effectiveness of the treatment measures implemented.

12.5.5.2 Water and ice, that is contact with food or food contact surfaces, shall be analyzed using reference standards and methods.

12.5.5 Implementation Guidance

What does it mean?

Even though the water supply may come from the town or regional water supply in which the water is treated, safety tested and maintained by the local authority, it is required that food processers implement their own testing to ensure the safety of the potable water used within the site.

Any water or ice that is used in the process that could come in contact with the product must be verified to be in compliance with local and national standards. In the US and Australia for example, the potability standard for drinking water is <1 coliform / 100 mL water and membrane filtration is the preferred method. However, standards also apply for *Salmonella* spp, *Shigella* spp, enterovirulent *E.coli, Vibrio cholera, Yersinia enterocolitica, Campylobacter jejuni*, and protozoa.

What do I have to do?

The site must be aware of the national and/or international potable water standards and any microbiological or chemical water standards imposed by customers. Monitoring and/or analysis can be conducted to ensure water continues to meet the required standard.

The monitoring may involve one or a number of the following:

- Regular testing of water (e.g., pH, turbidity);
- Checking filtration apparatus and changing it as required (refer to supplier specifications);

Regular cleaning of water holding tanks and reservoirs;

The rate at which water is monitored or tested should, ideally, be based on risk, owing to the potential for seasonal variations in the supply, but at minimum, water quality should be monitored and assessed for compliance at least annually. This should include for potability and any additional quality or safety attribute. Utilize recognized guidance or hire a suitably qualified external resource to collect samples. When utilizing an outside laboratory, seeking a laboratory that is properly accredited to complete the desired analysis is required. The water must be retested any time the water source is changed or when equipment is added to treat or convey water within the site's water system.

Where the treatment of water occurs on-site, either prior to usage or as a treatment of waste water, the treatment needs to have applicable analysis verifying the efficiency of the treatment.

12.5.5 Auditing Guidance

Water testing procedures will be reviewed as part of the initial desk audit. Subsequently, this element will be audited as part of each site audit through observation, review of records and interviews with operating personnel. Evidence may include:

- There is a documented water testing procedure in place, including frequency and test method;
- Water is microbiologically tested to verify cleanliness of the supply and effectiveness of treatment methods;
- Appropriate standards are used to collect and analyze water;

Where external laboratories are used, the laboratories are accredited to offer water testing services.

12.5.6 The Quality of Air and Other Gases

What the SQF Code says

12.5.6.1 Compressed air or other gasses (e.g. nitrogen, carbon dioxide) that contacts food or food contact surfaces shall be clean and present no risk to food safety.

12.5.6.2 Compressed air systems, and systems used to store or dispense other gasses used in the storage and distribution process shall be maintained and regularly monitored for quality and microbiological purity.

12.5.6 Implementation Guidance

What does it mean?

This applies to compressed air that comes into contact with products or surfaces which contact the products. It does not apply to air that does not come into contact with product or surfaces which contact products.

Purity means absence of contaminants that could cause a food safety hazard. Pure air means the air is free of risk for contamination of the products. Essentially, the air must not contribute any contamination to the product

What do I have to do?

Compressed air can be a source of chemical and microbiological contamination. Potential contaminants can include particulates, including dirt (microorganisms, atmospheric dirt and solid particulates, rust and pipe scales), water (water vapor, condensed liquid water and water aerosols) and oil (oil vapor, liquid oil and oil aerosols).

Sites must verify and validate that the compressed air used is appropriate and does not serve as a source of contamination. When compressed air comes in contact with exposed product or direct product contact surfaces, the air compressor must use food grade oil.

Preventive maintenance programs need to ensure that an appropriate filtration program is in place at the point of use and the filters are cleaned or changed at a frequency appropriate to the product and process or following any maintenance to air supply source or equipment. Any maintenance must be done in a hygienic manner.

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Nozzles and air hoses are to be in good condition, properly repaired and maintained in a hygienic state (e.g., cleaned and sanitized). Hoses and nozzles are to be kept off the ground.

It is generally advisable to locate the filtration as close as practically possible (near the "point of use," or the point where air contacts the product), so as to not have long lengths of piping/tubing between the microbial removal filter and the air/food contact point.

The site may consider the following controls for particulates

- i. Intake filters to remove atmospheric dirt and solid particulates.
- ii. An effective PM program should be in place to maintain the integrity of the filter.
- iii. Water, including vapor, liquid, condensed. A dryer in the compressed air system provides effective control. An effective PM program should be in place.

The presence of coalescing filters in the compressed air system effectively removes contamination. An effective PM program should be in place to maintain the integrity of the filter.

12.5.6 Auditing Guidance

Air quality program will be reviewed as part of the initial desk audit. Subsequently, this element will be audited as part of each site audit through observation, review of records and interviews with operating personnel. Evidence may include:

- The condition of air compressors and compressed air used to transport product, or otherwise to come into contact with exposed product and product contact surfaces;
- Filters are checked or changed at a frequency based on the air quality program;
- Maintenance staff has the data specification sheet for the filter housing;
- Follow up with preventative maintenance and SSOPs;
- Performance characteristics of the filter in place must match the risks identified in the site's assessment.
- Compressed air that is in contact with food is checked for purity using methods and at a frequency based on the air quality program and test procedures.

12.6 Storage and Transport

12.6.1 Storage and Handling of Goods

What the SQF Code says

12.6.1.1 The site shall implement an effective storage plan that allows for the safe, hygienic storage of ice, food products (frozen, chilled, and ambient), packaging materials, equipment, and chemicals.

12.6.1.2 The responsibility and methods for ensuring effective stock rotation principles are applied shall be documented and implemented.

12.6.1.3 Procedures are in place to ensure that all food products, and recouped product, are utilized within their designated shelf-life.

12.6.1 Implementation Guidance

What does it mean?

This element addresses how food products, materials and recoups do not get lost, damaged or contaminated in the process and, along with stored equipment and chemicals, are safely identified, utilized, rotated stored to maintain the safety, and integrity of the item.

What do I have to do?

The control of stock is not necessarily as simple as "first in, first out" (FIFO). The program must be designed to manage product safety and codes based on risk, customer specifications, conditions of the product, storage locations and inventory management.

The site storage plan should include a requirement that materials, food packaging, rework, equipment and chemicals be adequately stored far enough from walls so as to aide in cleaning, inspection and pest prevention. Additionally, plans shall also indicate that different materials shall not be stored on the same pallet unless they are physically segregated and that finished products are not stored outside.

Materials used in the construction of storage rooms must comply with 12.2.3 and light fittings in storage areas must comply with 12.2.4.2.

Equipment storage rooms may be adjacent to equipment cleaning areas but kept separate to ensure there is no commingling of dirty and cleaned tools, utensils and equipment.

Racks are to be provided to ensure tools and equipment are not stored on the floor.

Where temporary or overflow storage is used, a risk analysis must be undertaken to ensure the stored product is not at risk or pose a risk to products, processes or personnel. The risk analysis must be documented and be available every time overflow storage is applied.

In particular:

- Materials and products must be held in a dry, clean area that is free from pests;
- Chemicals must be stored in a safe secure area that complies with relevant regulations and does not pose a risk to personnel or other products.

12.6.1 Auditing Guidance

The storage plan shall be reviewed initially at the desk audit and compliance to this requirement by observation, interview and review of records at each site audit. Evidence may include:

- Storage plan is documented, implemented and effective;
- Review of stock rotation procedure;
- Review of stock records;
- Understanding of personnel responsible for inventory management;
- Visual confirmation of material, work in progress, and product stock in storage;
- There is a dedicated storage area for clean tools, utensils and equipment;
- The equipment storage area allows access for cleaning;
- The equipment storage area protects equipment during storage;
- Alternative storage is being used;
- Risk analysis has been conducted for alternate storage;
- Materials or products are not being stored continuously in temporary storage;
- There is no risk of product contamination from the use of temporary storage;
- Records validate the safe alternate or temporary storage control measures.

12.6.2 Cold Storage, Freezing, and Chilling of Foods

What the SQF Code says

12.6.2.1 The site shall provide confirmation of the effective operational performance of freezing, chilling and cold storage facilities. Chillers, blast freezers and cold storage rooms shall be designed and constructed to allow for the hygienic and efficient cold/frozen storage of food, easily accessible for inspection and cleaning.

12.6.2.2 Sufficient refrigeration capacity shall be available to store chilled or frozen food at the maximum anticipated throughput of product with allowance for periodic cleaning of refrigerated areas.

12.6.2.3 Discharge from defrost and condensate lines shall be controlled and discharged to the drainage system.

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12.6.2.4 Cold and chilled storage rooms shall be fitted with temperature monitoring equipment and located so as to monitor the warmest part of the room and be fitted with a temperature measurement device that is easily readable and accessible.

12.6.2.5 Loading and unloading docks shall be designed to protect product during loading and unloading.

12.6.2 Implementation Guidance

What does it mean?

Freezing and cold storage apply to sub-zero temperatures and storage of the product at that temperature for preservation. Ideally, frozen food is stored at less than -18 °C (0°F).

Chilling refers to the process of reducing the temperature of food to 0 - $5^{\circ}C$ (32 - $40^{\circ}F$), and storing within that temperature range, to minimize pathogen growth and extend shelf-life.

In both cases, the equipment required to chill, freeze or store product must be effective and cater for the maximum throughput.

Controlled atmosphere storage for seasonal fruit and vegetable products in which oxygen, carbon dioxide and nitrogen concentrations are controlled and must also meet the requirements of 12.6.1 as well as temperature and humidity.

What do I have to do?

Refrigeration equipment shall have the capacity to maintain an ambient temperature at or below $5^{\circ}C$ ($40^{\circ}F$) except when loading or unloading product from the cooler unless other temperatures are prescribed by legislation. During these operations, the ambient temperature must return to $5^{\circ}C$ ($40^{\circ}F$) within a short time after access doors are closed.

Freezing and cold storage equipment shall have the capacity to maintain a product temperature below - 15° C (5°F) and must be maintained during loading and unloading.

A description of the refrigeration capacity needs to be included in the site plan. Verification may be demonstrated through historical temperature recordings.

Refrigeration facilities will be capable of reducing temperatures of product at rates suitable to maintain food safety and/or quality or as prescribed by legislation appropriate to the commodities being processed.

A written SOP shall address the timely and effective removal of water or excessive ice build-up. Dense waterproof concrete is the material generally used for flooring and needs to be smooth and graded to reduce water accumulation (see also 12.2.3)

The tops of refrigerated rooms are to be covered with a rodent-proof material. Inaccessible cavities need to be sealed to prevent the access of rodents or other pests. Storage racks and shelving need to be constructed of a non-corrosive material and easily cleanable. The product on these racks or shelves should be at least 30 cm (twelve inches) from walls and 150 mm (6 inches) off the floor to prevent contamination and allow for adequate air circulation around the product (refer to 12.2.3).

Condensation from cooling equipment must be piped to the facility drainage system or to the exterior of the building in a manner which does not create pools or standing water. When defrosting refrigeration units, it is necessary that the timing of the defrosting be such that it does not pose a threat to the sanitary conditions of the area or product.

Monitoring and validation of the cooler temperature shall be done in accordance with the site's Food Safety Plan or similar document. The site shall be able to verify and validate cooling or storage temperatures prescribed by legislation. Manual monitoring of cold storage rooms on a predetermined frequency is acceptable provided there is a justification in place for the frequency and documentation is kept on file with corrective actions, if applicable.

Where open docks exist, products are to be loaded and unloaded in a manner which protects the premises, the product and/or packaging from inclement weather, pests and temperature abuse.

12.6.2 Auditing Guidance

Cold storage, freezing, and chilling procedures (SOPs) and temperature validation procedures will be reviewed as part of the initial desk audit. Subsequently, they will be audited as part of each site audit through observation, review of records and interviews with refrigeration mechanics and

operating personnel. Evidence may include:

- SOPs exist for chilling, freezing and cold storage;
- SOPs exist for validation of chilled and frozen temperatures and times;
- Site can confirm the effective operation of the chillers/freezers;
- Site can confirm the effective operation of the chilled and cold storage rooms;
- Cold storage rooms are properly designed and constructed;
- Cold storage rooms are easily cleaned;
- Cold storage areas are easily accessible for inspection;
- There is adequate refrigeration capacity;
- There is adequate freezer capacity;
- There is no condensation in the cold storage area;
- There is no frost or ice build-up in the cold storage area;
- Defrost water is discharged appropriately.
- Temperature monitoring is adequate;
- Temperature records are retained;
- Loading/unloading docks are adequately designed to protect product and product temperature.

12.6.3 Storage of Shelf Stable Packaged Foods

What the SQF Code says

12.6.3.1 Rooms used for the storage of dry goods shall be located away from wet areas and constructed to protect the product from contamination and deterioration.

12.6.3.2 Racks provided for the storage of food Products shall be constructed of impervious materials and designed to enable cleaning of the floors and the storage room. Storage areas shall be constructed to prevent food products becoming a harborage for pests or vermin.

12.6.3.3 Vehicles used in storage rooms shall be designed and operated so as not to present a food safety hazard.

12.6.3 Implementation Guidance

What does it mean?

Rooms where materials, products and other dry goods - apart from hazardous chemicals, (refer to 12.6.5) are stored, must be clean, dry and accessible.

What do I have to do?

Materials and products must be stored in designated storage areas which protect them from contamination and deterioration. These materials shall be stored only in dry areas when staged for distribution. Ensure that storage areas are adequately protected from the elements, rodents and other pests.

Sites must also be aware of the need to segregate and minimize risks to products containing allergens (refer to 2.8.1). These materials may require separate, dedicated storage rooms or designation locations (e.g. bottom row of racking)

Materials used in the construction of storage rooms must comply with 12.2.3 and light fittings in storage areas must comply with 12.2.4.

The racks provided for the storage of products shall be constructed of impervious materials and designed to be easy to clean. Stands and the lower shelves of stands should be at least 150 mm (6 inches), or as required by applicable regulation above floor level to facilitate proper cleaning.

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Fork lifts, hand-forks and other vehicles used in storage areas must be safe to use, hydrocarbon emissions must be controlled and operated in a manner that does not cause damage to product and equipment.

12.6.3 Auditing Guidance

This element will be audited as part of each site audit through observation and interviews with operational staff. Evidence may include:

- Storage rooms are adequately designed to protect product and materials;
- Product storage racks are made of material that is easily cleanable;
- Product storage racks allow access to floor/wall junction for cleaning;
- Vehicles used in storage or cold storage areas that release hydrocarbon emissions do not present a hazard to food product or materials.

12.6.4 Storage of Equipment and Containers

What the SQF Code says

12.6.4.1 Storage rooms shall be designed and constructed to allow for the hygienic and efficient storage of equipment and containers.

12.6.4 Implementation Guidance

What does it mean?

Storage areas used for equipment and containers require the same design and cleanliness requirement as those used for products and materials (see 12.2.2 & 12.2.3)

What do I have to do?

Sites shall ensure that rooms or areas, even temporary, are appropriate for storing equipment and containers that can or will be used in handling products and materials. They shall follow the same design, maintenance and sanitation requirements as those for food products.

12.6.4 Auditing Guidance

This element will be audited as part of each site audit through observation and interviews with operational staff. Evidence may include:

- Storage rooms are adequately designed to protect product and materials;
- Equipment, containers or other items are rotated regularly to assist in cleaning and pest control inspection activities.

12.6.5 Storage of Hazardous Chemicals and Toxic Substances

What the SQF Code says

12.6.5.1 Hazardous chemicals and toxic substances that are for use in the site with the potential for food contamination shall be stored separate from the distribution storage area so as not to present a hazard to staff, product, packaging, product handling equipment. Hazardous chemicals shall be stored in their original containers, or in clearly labelled secondary containers if allowed by applicable legislation.

12.6.5 Implementation Guidance

What does it mean?

Cleaning chemicals, pesticides, lubricants, oil, grease, boiler chemicals, etc. plus any other toxic substances must be stored in designated separately secure storage areas.

What do I have to do?

There must be clearly visible means of separation of these groups of chemicals or toxic substances. They must not be stored on the same shelf or above each other on the same rack. Pest management chemicals shall be stored separate from cleaning chemicals and separate from engineering chemicals. Bulk containers of hazardous chemicals or toxic substances must have sufficient spill-proof procedures that ensure that no cross-contamination can occur. There must be signage indicating this area is a hazardous chemical storage area.

Chemicals that are inventoried, stored and distributed as part of the distribution service must be stored separately from hazardous chemicals used for cleaning & sanitation and should not be used for operational purposes. The risks and hazards from these products shall be included in the food safety plan and controlled accordingly.

Chemical storage areas must comply with local or national regulations, be designed to contain spillages, and be ventilated, secure and lockable. Only approved and authorized chemicals are to be stored. An inventory of stored chemicals must be available at all times.

Chemicals must be stores in their original containers or transferred to specifically designed bulk storage units that are correctly labelled.

Utensils, tools or equipment used for food product must not be stored in the same room as hazardous chemicals.

The site must ensure that Safety Data Sheets (SDS) are readily available and accessible to personnel handling or coming into contact with hazardous chemicals. The site must also ensure that personnel have been trained in the safe handling and use of all hazardous chemicals in use on site as required by legislation.

Please refer to 12.2.10.7 for pest control chemicals and 12.2.11.4 for cleaning chemicals.

12.6.5 Auditing Guidance

This element will be audited as part of each site audit through observation and interviews with operators, cleaners and pest control personnel. Evidence may include:

- There is one or more designated storage rooms/areas for storing of chemicals;
- Chemical storage rooms/areas are correctly designed and constructed, and meet regulatory standards;
- Chemical storage rooms/areas are ventilated, secure and lockable;
- There is a detailed inventory of stored chemicals;
- The inventory agrees with the actual stock in store;
- Only authorized chemicals are stored;
- There is appropriate signage indicating the area as a hazardous storage area;
- The chemical storage areas are sufficiently separated from operational areas;
- There is spill control and spill kits available in the chemical storage rooms;
- There are no operational tools, utensils or equipment stored with hazardous chemicals;
- Packaging is not stored in an area used to store hazardous chemicals;
- · Sanitizers and detergents are not stored with pesticides or other toxic chemicals; and
- Chemicals are stored in original containers or transferred safely to labeled and designated containers for on-going use.

12.6.6 Alternative Storage and Handling of Goods

What the SQF Code says

12.6.6.1 Where goods described in 12.6.1 to 12.6.4 are held under temporary or overflow conditions that are not designed for the safe storage of goods, a risk analysis shall be undertaken to ensure there is no risk to the integrity of those goods or contamination or adverse effect on food safety and quality.

12.6.6 Implementation Guidance

What does it mean?

During loading or unloading activities or when normal storage areas are full, temporary storage of products can occur provided the area has been inspected and a risk assessment completed as to it acceptability for short term product storage.

What do I have to do?

When a need for temporary storage is identified the SQF Practitioner or designate will be required to document a risk assessment of the area being designated for the temporary storage. The assessment and analysis shall take into consideration the current conditions of the area and the length of time required for the temporary storage. The assessment should be documented and a completed record filed following the movement of product from the temporary storage. Ongoing use of this option should be avoided and a longer-term solution provided to account for overflow conditions. E.g. Use of outside dock areas, parking areas etc.

12.6.6 Auditing Guidance

This element will be audited as part of each site audit by observations, review of records and interview with warehouse or shipping operators and drivers. Evidence may include:

- Status and appropriateness of current temporary storage areas;
- Risk assessment records.

12.6.7 Loading, Transport and Receiving Practices

What the SQF Code says

12.6.7.1 The practices applied during loading, transport and unloading of food shall be documented, implemented and designed to maintain appropriate storage conditions and product integrity.

12.6.7.2 Trailers shall be washed in a segregated area away from the distribution site in a manner so as to not pose a risk to the products.

12.6.7.3 Practices shall be in place for loading, transport and unloading receiving to protect against the contamination from biological, chemical and physical risks.

12.6.7.4 Records of compliance activities shall be accessible.

12.6.7.5 Sites shall have a procedure in place that Is documented and implemented to ensure trailers are inspected prior to receiving shipments or loading to ensure that the trailer is in good repair, clean, secured and at required environmental conditions and temperatures.

12.6.7 Implementation Guidance

What does it mean?

Activities at loading and unloading docks need to be completed by properly training employees to ensure the integrity of inbound and outbound products

What do I have to do?

The site shall have detailed work instructions or procedures that outline how employees conduct loading and unloading of products and how these practices protect against biological, chemical or physical hazards. Trained employees must complete records to illustrate that vehicles, trailers and other forms of transportation have been inspected and/or cleaned prior to loading or unloading and that any temperature control units are functioning appropriately.

Inspections should conclude that transport vehicles are clean, contain no evidence of leaks or holes, are free from offensive odors and meet food defense requirement such as locks or seals. If conditions are not appropriate the rejection or correction must be recorded.

12.6.7 Auditing Guidance

Loading and unloading procedures will be reviewed during This element will be audited as part of each site audit by observations, review of records and interview with warehouse or shipping operators and drivers. Evidence may include:

- Pre-shipment reviews are conducted on transportation vehicles for cleanliness, maintenance, and suitability;
- The requirement for pre-shipment inspection is included in the transport protocol (refer to 12.6.4) and the transport contract (refer to 2.3.3);
- Loading and staging of product does not expose product to potential abuse or contamination.

12.6.8 Staging and Loading

What the SQF Code says

12.6.8.1 Vehicles (e.g. trucks/vans/containers) used for transporting food shall be inspected prior to loading to ensure they are clean, in good repair, suitable for the purpose and free from odors or other conditions that may impact negatively on the product.

12.6.8.2 Staging and loading practices shall be designed to minimize unnecessary exposure of the product to conditions detrimental to maintaining product integrity.

12.6.8.3 Food transport vehicle's refrigerated unit shall maintain the food at required temperatures and the unit's temperature settings shall be set, checked and recorded before loading and product temperatures monitored at regular intervals during loading as appropriate.

12.6.8 Implementation Guidance

What does it mean?

Loading practices shall be documented as per 12.6.7. They shall include conditions and inspections for outbound trucks and trailers with particular attention to outbound vehicle refrigeration units and the ability to keep product at appropriate temperatures.

What do I have to do?

Prior to loading all outbound trucks and trailers must have a visual inspection conducted for cleanliness, pest infestation and structural conditions and to verify that all trucks/trailers are free of offensive odors. All inspection findings are to be maintained in records.

The staging and loading process can subject product to fluctuations in temperatures, depending on the dock/staging area temperature and the length of time in takes to complete the loading. Sites should endeavour to have a cold dock (temperature controlled) if handling refrigerated and frozen products. The staging areas should remain in a clean and orderly manner to facilitate easy and quick loading. Staging and loading SOP's should provide employees with requirements on time/temperature as well as how to minimize damage to handling and appropriate loading configurations. Loading configurations should take into account minimization of hazards and should include keeping chemicals separated, fresh produce loaded on top of pallets and covered, refrigerated and frozen foods kept separate and in separate compartments.

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A pre-cooled trailer is required prior to loading products that have been stored in refrigerated or frozen storage areas. The refrigeration unit on a trailer or truck shall be inspected to ensure its at an appropriate set point, interior temperature is appropriate (accounting for defrost cycles) and that these observations on recorded for each load.

12.6.8 Auditing Guidance

This element will be audited as part of each site audit by observations, review of records and interview with warehouse or shipping operators and drivers. Evidence may include:

- Pre-shipment reviews are conducted on transportation vehicles for cleanliness, maintenance, and suitability, including pre-cooling and refrigeration unit checks;
- The requirement for pre-shipment inspection is included in the transport protocol (refer to 12.6.7) and the transport contract (refer to 2.3.3);
- Loading and staging of product does not expose product to potential abuse or contamination.

12.6.9 Transport

What the SQF Code says

12.6.9.1 The refrigeration unit shall be operational at all times and checks completed of the unit's operation, the door seals and the storage temperature checked at regular intervals during transit.

12.6.9 Implementation Guidance

What does it mean?

Product temperatures need to be maintained throughout the transport from distribution center to the customer. Evidence to support this will ensure no product temperature abuse has occurred during transit.

What do I have to do?

The site must ensure that the products loaded on to vehicles of any sort will be maintained at the correct temperatures for the duration of their time in transit. How this is accomplished will vary depending on site ownership and responsibility for this requirement.

If the transportation of the product is completed in company owned and operated vehicles then the risks and hazards associated with this function, including temperature control, must be included in the food safety plan which will include how these risks are controlled (see 2.4.3). Minimally, evidence of the correct functioning and temperature control throughout the course of transport from the distribution center to the customer must be recorded. This can be accomplished through temperature logs completed by the driver and/or through electronic capture.

If the transportation of the product is contracted to 3rd party carriers such has transportation companies or home delivery services, then the contracts must clearly define how these carriers would monitor and record temperatures if the risks due to time/temperature abuse are possible. See 2.3.3 for Contract Service Provider requirements.

The site must also consider the protection of products within the carrier as part of its Food Defense Plan (see 2.7.1). Minimally the site should consider the use of door seals or locks to ensure only designated and approved drivers are opening and entering the vehicle and have access to products being transported.

12.6.9 Auditing Guidance

The methods and responsibility will be reviewed in the food safety plan and procedures as part of the initial desk audit. Subsequently this element will be audited as part of each site audit by observations, review of records and interview with warehouse or shipping operators and drivers. Evidence may include:

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- Data and temperature logs from vehicles and shipments;
- Door seals or locks present and in use on shipments;
- Contract service contracts.

12.7 Separation of Functions

12.7.1 Process Flow

What the SQF Code says

12.7.1.1 The process flow shall be designed to prevent cross contamination and organized so there is a continuous flow of product through the process. The flow of personnel shall be managed such that the potential for contamination is minimized.

12.7.1 Implementation Guidance

What does it mean?

The layout of processes, storage, shipping and receiving must be designed to minimize the potential for contamination from materials, premises, other processes, other parts of the same process, vehicle (e.g., forklift) traffic and pedestrians (e.g., employees, contractors or visitors).

What do I have to do?

The layout of a storage and distribution facility must consider the risks of product contamination and be designed to minimize or eliminate those risks. The process flow shall ensure that equipment, materials and products are sufficiently separated and organized in a manner that reduces the risk of cross contamination or mixing.

Process flow considerations may include, but is not limited to:

- Avoiding u-shape, or circular processes where the "clean" or finished product end of the process
 can be contaminated by the material or input end of the process (e.g. recoup or repacking);
- Controlling pedestrian walkways to avoid employees walking within areas without designated footwear or clothing;
- Avoiding where possible overhead platforms, catwalks or stairways where debris can fall into or on the product;
- Avoiding equipment bottlenecks, corners or areas where product can be not be easily accessed.

12.7.1 Auditing Guidance

This element will be audited as part of each site audit through observation. Evidence may include:

- Process flow has been designed to minimize the risk of cross contamination;
- The flow of personnel is designed to minimize the risk of cross contamination.

12.7.2 Receiving

What the SQF Code says

12.7.2.1 Prior to opening the doors the food transport vehicle's refrigerated unit storage temperature settings and operating temperature shall be checked and recorded. Receiving shall be completed efficiently and product temperatures shall be recorded at the commencement of unloading and at regular intervals during unloading.

12.7.2.2 Receiving practices shall be designed to minimize unnecessary exposure of the product to conditions detrimental to maintaining product and package integrity.

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12.7.2 Implementation Guidance

What does it mean?

The receiving of products into a storage and distribution facility must be completed in a manner that maintains the product integrity and ensures product temperatures have been maintained during transport to the site and prior to receipt.

What do I have to do?

Unloading procedures outlined as part of 12.6.7 must be followed by receiving personnel to ensure product integrity is not compromised as product is moved from inbound vehicles to storage locations within the facility. Included in these procedures are instructions to avoid possible time/temperature abuse, physical damage to products and any potential cross contamination with other products or conditions within the facility. Should a hazard or incident occur personnel must follow corrective action procedures and how to isolate the non-conforming product (see also 2.4.5 & 2.5.3)

As part of the unloading procedure, personnel must review temperature and refrigeration unit logs from the vehicle to ensure that temperatures have been maintained throughout the transfer of product from the supplier to the distribution center. This must be completed prior to opening any doors. Should evidence of temperature abuse and/or refrigeration unit occur personnel must follow the defined corrective action procedures which may include holding all product in the shipment or rejecting the shipment. All actions including temperature and refrigeration unit inspections and corrective actions must be documents and recorded.

When vehicle temperatures and refrigeration units are shown to meet requirements then product temperatures can be taken, with a calibrated and functioning thermometer, initially and thereafter at an interval stated in the unloading procedure. Types of products, sampling plans and temperature requirements shall all be included in procedures and on forms used to record the resulting temperatures. Where product temperatures do not meet the stated requirement personnel shall place the product(s) on hold as per 2.4.5.

12.7.2 Auditing Guidance

The methods and responsibility will be reviewed in the procedures as part of the initial desk audit. Subsequently this element will be audited as part of each site audit by observations, review of records and interview with warehouse or shipping operators and drivers. Evidence may include:

- Observations of product unloading practices;
- Observations of product transference to storage locations;
- Employee interviews;
- Review of thermometer calibration records and personnel usage of devices;
- Review of records, holds and corrective action documentation;

12.7.3 Control of Foreign Matter

What the SQF Code says

12.7.3.1 The responsibility and methods used to prevent foreign matter contamination of food product shall be documented, implemented and communicated to all staff.

12.7.3.2 Inspections shall be performed to ensure plant and equipment remains in good condition and potential contaminants have not detached or become damaged or deteriorated.

12.7.3.3 The following preventative measures shall be implemented where applicable to prevent glass contamination:

- i. All glass objects or similar material used by the site in storage and handling areas shall be listed in a glass register including details of their location.
- ii. Containers, equipment and other utensils made of glass, porcelain, ceramics, laboratory glassware or other like material (except where product is contained in packaging made from

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these materials, or measurement instruments with glass dial covers or MIG thermometers required under regulation) shall not be permitted in food processing/contact zones.

- iii. Product that is in glass or similar material that is for distribution purposes shall be stored in a manner that prevents contamination.
- iv. Conduct regular inspections of storage and handling areas to ensure they are free of glass or other like material and to establish no changes to the condition of the objects listed in the glass register
- v. Glass instrument dial covers on equipment and MIG thermometers shall inspected at regular intervals.

12.7.3.4 Wooden pallets used in food storage shall be dedicated for that purpose, clean, maintained in good order and their condition subject to regular inspection.

12.7.3.5 Loose metal objects on equipment, equipment covers and overhead structures shall be removed or tightly affixed so as not to present a hazard.

12.7.3 Implementation Guidance

What does it mean?

Foreign matter can originate from:

- External sources such as pests and material/inputs;
- Internal sources of foreign matter include the building (e.g., rust, insects and insulation), surface coatings (e.g., flaking paint, damaged render), equipment (e.g., nuts, pins, screws, washers, etc.), metal shavings, glass (e.g., from windows, or utensils) and wood (e.g., from pallets or brooms or other equipment).

In all cases, where there is risk for potential foreign matter contamination, procedures must be in place to eliminate or minimize the risk of foreign materials entering the product. The site needs to be aware of potential sources of foreign matter contamination and include such analysis in the food safety plan.

What do I have to do?

The site must have a procedure in place to identify, isolate, inspect and rework or dispose of product that is known to be at risk of foreign matter contamination. This shall include isolation, labeling, quarantine of affected product, and depending on the nature of the suspected contaminant, further inspection or examination of the product to determine the source and extent of the contamination so that a decision can be taken on its disposition. See also 2.4.5 Non-conforming Product or Equipment.

The site should use the Internal Audit or regular inspections (see 2.5.5) to assessment possible foreign materials contamination risk in the facility. Where risks or hazards are noted a corrective action must be fully documented and included in reporting. Where documented in the food safety plan, the audits or inspections should have triggers or reminders at certain points in the facility to assess and control the risks documented in the plan.

The facility should have a list (register) of items that are made of glass or brittle plastic and that are in close proximity to stored and handled product. Note that office areas and sanitary facilities used by staff need not be included. The list should be reviewed and items inspected on a regular basis to ensure breakage, chips or cracks have not occurred. This can be a separate inspection or included with the normal regular premises inspection as per 2.5.5.

Wooden pallets are a known source of contamination due to being in poor repair or damaged during use. The site should have a procedure for inspecting pallets prior to each use and some guidance for personnel to use to assess whether the pallet is appropriate for use or if it should be discarded or repaired. Pallet storage location should also be considered since inappropriate locations can lead to both physical damage or chemical contamination.

Where a glass or similar breakage occurs, the procedure must include a glass clean-up process that covers the footprint of where glass shards may have been distributed. The procedure must include a shut-down of the whole area, and a thorough clean-up to eliminate all broken glass. Brooms, brushes, vacuums and footwear must be included in the clean-up and either be specifically dedicated for such purpose or discarded as part of the clean-up. The area must be thoroughly inspected before recommencing operations.

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12.7.3 Auditing Guidance

The foreign matter control (including glass) procedures shall be reviewed as part of the initial desk audit. Subsequently, the procedure including glass clean-up protocols will be audited as part of each site audit through observation, review of records and interviews with operating personnel. Evidence may include:

- Isolation and rework/disposition is included in the foreign matter control procedure;
- Isolation and rework/disposition is effectively implemented;
- Internal audits and inspections include observation of foreign material risks and hazards;
- Pallet inspection, storage and control is effective at minimizing foreign material hazards;
- Glass breakage procedure is included in the foreign matter control procedure;
- Glass breakage procedure includes clean-up of footwear, tools, brooms, brushes and other equipment;
- Glass breakage procedure is effectively implemented.

12.7.4 Managing Foreign Matter Contamination Incidents

What the SQF Code says

12.7.4.1 In all cases of foreign matter contamination the affected food product shall be isolated, inspected, reworked or disposed of.

12.7.4.2 In circumstances where glass or similar material breakage occurs the affected area is to be isolated, cleaned and thoroughly inspected (including cleaning equipment and footwear) and cleared by a suitably responsible person.

12.7.4 Implementation Guidance

What does it mean?

Foreign materials hazards and their controls as per 12.7.3 must also ensure that any findings that effect the integrity of products in storage, staging or recoup shall ensure that such products are properly controlled and dispositioned.

What do I have to do?

The site must have a procedure in place to identify, isolate, inspect and rework or dispose of product that is known to be at risk of foreign matter contamination. This shall include isolation, labeling, quarantine of affected product, and depending on the nature of the suspected contaminant, further inspection or examination of the product to determine the source and extent of the contamination so that a decision can be taken on its disposition. See also 2.4.5.

Where a glass or similar breakage occurs, the procedure must include a glass clean-up process that covers the footprint of where glass shards may have been distributed. The procedure must include a shut-down of the whole area, and a thorough clean-up to eliminate all broken glass. Brooms, brushes, vacuums and footwear must be included in the clean-up. The area must be thoroughly inspected before recommencing operations.

12.7.4 Auditing Guidance

The foreign matter control (including glass) procedures and control of non-conforming product (2.4.5) procedures shall be reviewed as part of the initial desk audit. Subsequently the execution of such procedures will be audited as part of each site audit through observation, review of records and interviews with operating personnel. Evidence may include:

- Isolation and rework/disposition is included in the foreign matter control procedure;
- Isolation and rework/disposition is effectively implemented;

- Glass breakage procedure is included in the foreign matter control procedure;
- Glass breakage procedure includes clean-up of footwear, tools, brooms, brushes and other equipment;
- Glass breakage procedure is effectively implemented.

12.8 Waste Disposal

12.8.1 Dry and Liquid Waste Disposal

What the SQF Code says

12.8.1.1 The responsibility and methods used to collect and handle dry, wet and liquid waste and store prior to removal from the premises shall be documented and implemented.

12.8.1.2 Waste shall be removed on a regular basis and not build up in food handling or storage areas. Designated waste accumulation areas shall be maintained in a clean and tidy condition until such time as external waste collection is undertaken.

12.8.1.3 Trolleys, vehicles waste disposal equipment, collection bins and storage areas shall be maintained in a serviceable condition and cleaned and sanitized regularly so as not to attract pests and other vermin.

12.8.1.4 Reviews of the effectiveness of waste management will form part of regular hygiene inspections and the results of these inspections shall be included in the relevant hygiene reports.

12.8.1.5 Inedible waste designated for animal feed shall be stored and handled so as to not cause a risk to the animal or risk to other food designated for further processing for human consumption.

12.8.1 Implementation Guidance

What does it mean?

The procedures for storage and disposal of all types of waste – dry and liquid – must be documented and implemented. The procedure will include how waste is contained in appropriate, covered and labeled containers, the frequency of disposal, how it is disposed of and who is responsible for it. Customer requirements, local regulations and community expectations concerning recycling and waste disposal and transport must also be considered.

What do I have to do?

As with solid waste, the disposal of any liquid waste from production and handling areas is essential to the maintenance of a clean and safe working environment. Procedures are to be in place to monitor the effective removal of liquid and solid wastes per written facility procedures.

On-site incinerators, compactors or other waste collecting/disposal equipment needs to be designed, installed, constructed and operated so as not to create a hazard to product or the surrounding environment. Compactors and other waste storage areas must not be located adjacent to any area where product is exposed.

Cafeteria/lunch room food waste shall be stored separately from manufacturing waste in covered pestproofed containers and emptied on a basis that prevents the attraction of pests.

The site must have a plan, where appropriate, to address the proper disposal or destruction of trademarked materials/products taking note of that provided by customers. If contracted disposal is used, the site must take measures to verify disposal procedures are followed and that the services of the contracted service provider is documented as per 2.3.3.

At the end of the shift or day (depending on the site and operation), all office and operational trash needs to be removed by designated employees and disposed of in the external trash receptacle. All trash generated in operations must be separated for recycling where possible or as per local regulations.

Empty chemical drums shall be collected and transported to secured storage (refer to 12.2.10.9 & 12.2.11.6)).

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Exterior waste containers need coverage or lids to prevent attracting flies or vermin. It is also advisable to secure waste containers in regards to site security requirements (refer to 2.7)

Review of the waste collection and handling system should be incorporated as part of the internal audit or regular inspections of the site (refer to 2.5.5).

12.8.1 Auditing Guidance

Waste handling, storage and disposal procedures shall be reviewed as part of the initial desk audit. Subsequently, waste storage and removal will be audited as part of each site audit through observation, review of records and interviews with operating personnel. Evidence may include:

- Waste handling, storage and disposal procedures are documented;
- Waste handling, storage and disposal procedures include how waste is contained in appropriate, covered and labeled containers; frequency of disposal; how it is disposed of; and who is responsible for waste handling and disposal;
- Waste handling, storage and disposal procedures are fully implemented;
- Waste handling, storage and disposal procedures adequately dispose of waste without risk of product contamination;
- Waste is regularly removed from operations areas;
- Waste collection and storage areas are maintained and cleaned;
- Containers for waste are properly maintained and cleaned;
- Trolleys, vehicles and equipment used for waste are properly cleaned;
- Daily inspections are conducted to monitor handling of waste;
- Records are maintained of waste disposal;
- The waste system is included in the internal audit and inspection programs.

12.9 Exterior

12.9.1 Grounds and Roadways

What the SQF Code says

12.9.1.1 The grounds and area surrounding the premises shall be maintained to minimize dust and be kept free of waste or accumulated debris so as not to attract pests and vermin.

12.9.1.2 Paths, roadways and loading and unloading areas shall be maintained so as not to present a hazard to the food safety operation of the premises.

12.9.1.3 Surroundings shall be kept neat and tidy and not present a hazard to the hygienic and sanitary operation of the premises, or harborage for pests.

12.9.1 Implementation Guidance

What does it mean?

Unkempt surroundings (including the accumulation of unused equipment, pallets, bins, drums, pooling water or waste) can provide harborage for vermin and other pests and, in turn, pose a serious hazard to the hygienic operation of a storage and distribution operation.

What do I have to do?

The provision of lawn and landscaping is effective for sealing large traffic areas. The site should ensure that there is a vegetation-free zone around all buildings and storage areas that are surrounded by grass, plants or trees. High vehicle traffic areas are also required to be effectively sealed to prevent dusty conditions.

To prevent such a hazard, proper and purposeful measures for separation of drains and the site draining system shall be implemented. Additionally, these areas shall be kept clear of debris build up in and surrounding such areas.

Exterior construction projects that impact sealed areas should be reviewed, and controls established on a temporary basis during the project timeline.

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Where employee amenities are external to the site, the access or pathways to the amenities must be sealed, and should be covered to allow for weather conditions.

12.9.1 Auditing Guidance

This element shall be reviewed as part of each site audit. Evidence may include:

- Exterior grounds are maintained, tidy and uncluttered and do not provide pest harborage areas;
- Exterior grounds are managed to minimize dust or other hazards;
- Exterior grounds are kept free of waste;
- Exterior paths and roadways are managed to minimize dust or other hazards;
- Exterior loading and unloading areas are maintained to minimize hazards;
- Grass and vegetation is kept under control in surrounding areas;
- Equipment that is stored outside is protected from the weather;
- External paths from amenities to the site are sealed.

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