

AUDIT
REPORT

Targeted Audit of Cold Stores

NOVEMBER 2015



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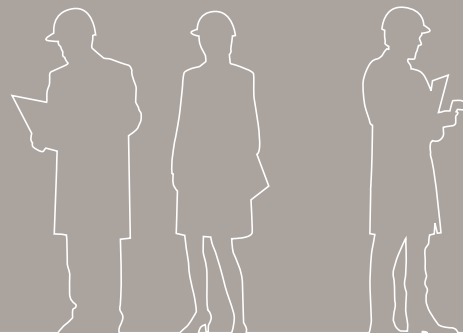


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1. GLOSSARY

DAFM	Department of Agriculture, Food and the Marine
FSAI	Food Safety Authority of Ireland
HSE	Health Service Executive
SFPA	Sea-Fisheries Protection Authority

2. EXECUTIVE SUMMARY

The Food Safety Authority of Ireland (FSAI) recently completed an audit of cold stores to assess food business operator compliance with food legislation applicable to their business. The audit team examined compliance with particular focus on requirements regarding traceability, labelling and identification of product stored in the establishment.

The programme consisted of 18 on-site audits in commercial cold stores, i.e. cold stores where the operator provides a service to other food business operators by way of rental of space; or provision of services, e.g. blast freezing and tempering. Establishments were selected based on size, type of products stored and services offered. Each cold store operator was provided with an individual report following the audit of their business and these reports were copied to the relevant supervising official agency. Verification of the implementation of corrective action to address audit findings is carried out by the official agencies as part of their official controls. The FSAI invited personnel from the relevant supervising official agencies to attend the audits. The Department of Agriculture, Food and the Marine (DAFM) attended the audits at establishments under their supervision, while the Health Service Executive (HSE) did not attend. An observer from the Sea-Fisheries Protection Authority (SFPA) attended a number of audits at DAFM approved cold stores as the cold store operators were known to be storing fish.

Of the 18 establishments visited, two were not carrying out commercial cold storage activities at the time of the audit. Thus, the results presented in this report are drawn from the findings of the individual audits carried out in the 16 operational commercial cold stores.

More revenue is generated from movement and handling of product and from the additional services offered to clients, than from storage of product. This has led to commercial cold stores expanding their businesses to include a wide range of services. During the audit, 22 distinct services were being offered by the commercial cold store operators. The expansion of services offered by cold stores to clients has meant that cold stores are now routinely operational outside normal working hours, with many providing clients with 24 hour access. The practice of sub-letting cold store chambers or dedicated space within a chamber to tenants has become common. These tenant operations varied from being an 'outpost' of a larger company, to small food businesses using the space in the cold store as their sole premises. In some of the cold stores audited, these tenant food business operators were operating unsupervised.

Compliance with legal requirements was assessed during each of the 16 audits. Operational controls, documented procedures and records maintained by the cold store operator were audited. Electronic warehouse management systems were being used by the cold store operators to record and manage information relating to products being stored in their cold store. The warehouse management system enables the food business operator to record a significant amount of detail relating to the consignments entering and leaving their cold store. Compliance checks on pre-requisite programmes, food safety management systems, temperature controls, returns, traceability, product identification and location, labelling, product description and the use of the identification mark were carried out by the audit team. A suite of four specific checks was carried out in relation to the electronic warehouse management system which was in place in 14 of the 16 cold stores audited. The checks carried out related to recording empty pallet spaces, product held on site for a specific client, out-of-date product and also a check on incoming consignments for a specified period of time.

In the past, cold stores were at the periphery of the food chain, either storing raw materials or finished product for processors. The activities undertaken in cold stores are now more closely aligned with those of processors or wholesalers. The frequency of official controls applied in these cold stores audited is not, in the opinion of the audit team, commensurate with the risk associated with the activities and complex arrangements associated with these establishments. There were examples of official controls being applied in an effective manner in some of the audits of the cold stores. However, in the majority of audits conducted, the inspectors were not familiar with

the full suite of activities being carried out in, or tenants operating from the establishment. Neither were they familiar with the warehouse management systems in place. Other gaps in the application of official controls were identified during the audit. Some inspectors limited official controls to specific product types, e.g. meat, and did not undertake any official control activities relating to other products.

Due to the complexity of commercial arrangements and related operational practices in these cold store establishments, it can sometimes be difficult to establish with certainty, legal liability for compliance with food law.

The audit team identified many examples of Irish and EU origin meat, which were non-compliant with the legal requirement that packages of fresh meat must be sealed with the Identification Mark in a manner which ensures that the mark will be destroyed if the package is opened.

The 71 breaches of legislation identified highlight the need for the cold store operators to improve compliance with food law relevant to their business. In some of the audits, fundamental deficiencies relating to the basic management of product traceability, associated information and documentation, were identified.

In contrast, numerous examples of best practice were observed during the audits; many of which included the customisation of the electronic warehouse management system to track and record movement of product within the cold store, integration of the system with client software and also scanning of associated paperwork.

Thirteen recommendations are made in order to strengthen controls in this area.

3. INTRODUCTION

The FSAI has overall responsibility for the enforcement of food law in Ireland, which is predominantly carried out through service contract arrangements with official agencies. The FSAI carries out targeted audits of food businesses to determine the level of compliance with current food law and the effectiveness of its implementation.

This targeted audit of cold stores was undertaken as part of the FSAI's 2014 planned programme of audits. The audit project focussed on stand-alone commercial cold stores, i.e. cold stores not attached to a slaughterhouse, processing plant or other food business. Stand-alone commercial cold stores provide a range of services for their clients, e.g. blast freezing, storage, cross-docking, order picking, tempering, decanting etc. or rent/lease refrigerated rooms or defined space to tenants.

Modern cold store operators derive more revenue from movement and handling of product and from the additional services offered to clients, than from storage of product. This has led to commercial cold stores expanding their businesses to include a wide range of services; the most basic of which is product storage. The audit assessed food business operator compliance with legislative requirements and the possible implications for official controls of this expansion of services.

3.1 Audit Objective

The objective of the audit was to assess food business operator compliance with legislation applicable to their business; in particular, regarding traceability, labelling and identification of product stored in the cold store.

3.2 Audit Scope

The scope of the audit was to assess food business operator controls in place in commercial cold stores. During each audit, the team verified that food business operators were complying with the criteria against which the audit was being carried out.

3.3 Audit Criteria and Reference Documents

The principal audit criteria referred to during the audit were:

- [Regulation \(EC\) No 178/2002](#) laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety, as amended
- [Regulation \(EC\) No 882/2004](#) on official controls performed to ensure verification of compliance with feed and food law, animal health and animal welfare rules, as amended
- [Regulation \(EC\) No 852/2004](#) on the hygiene of foodstuffs, as amended
- [Regulation \(EC\) No 853/2004](#) laying down specific hygiene rules for food of animal origin, as amended
- European Communities (Food and Feed Hygiene) Regulations, 2009 ([S.I. No. 432 of 2009](#)), as amended
- European Communities (Hygiene of Foodstuffs) Regulations, 2006 ([S.I. No. 369 of 2006](#)), as amended
- European Communities (General Food Law) Regulations, 2007 ([S.I. No. 747 of 2007](#)), as amended
- [Council Directive 2000/13/EC](#) on labelling, presentation and advertising of foodstuffs, as amended
- [Regulation \(EU\) No 1169/2011](#) of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers, as amended
- [Directive 2011/91/EU](#) on indications or marks identifying the lot to which a foodstuff belongs
- All relevant Statutory Instruments transposing the above legislation

3.4 Audit Methodology

This audit was undertaken using documented procedures which are included in the FSAI Quality Management System, namely the FSAI Audit Procedure and Charter. These procedures implement the FSAI audit obligations and are in accordance with the requirements of Regulation (EC) No 882/2004 (including Article 6.1 of Commission Decision 677/2006) and Section 48 (9) of the FSAI Act.

At the opening meeting, the audit team provided an explanation of the audit to the cold store operator, outlining that it was a targeted audit of cold stores and was being carried out on a nationwide basis. During the audit, operational controls, documented procedures and records relating to the food safety management system; including cleaning, pest control, temperature control, internal audits and inspections, control of quarantined and

returned products, controls of products entering and leaving the establishment, were examined. The cold store operator was requested to carry out a number of verification tests on the warehouse management system¹, including checks on traceability, empty pallet spaces, product on hold on the system, out-of-date products and a list of incoming loads for a specified period.

Of the 18 establishments visited, two were not operational at the time of the audit. Thus, it was not feasible to carry out an audit to meet the scope and criteria of the project. One was only operational for one month of the year and the other had downscaled activities significantly. The results presented in this report are therefore, drawn from the findings of the individual audits carried out in the 16 operational commercial cold stores.

The supervising agency was informed in advance of the audit so that the relevant inspector could accompany the audit team. It had been planned to include commercial cold stores supervised by the HSE, DAFM, SFPA and the local authorities. However, there were no cold stores under the supervision of the SFPA or the local authorities that were stand-alone commercial cold stores. Inspectors from DAFM attended the audits of the establishments it supervises and an inspector from the SFPA attended a number of audits in cold stores where there was storage of fish. The Environmental Health Service did not attend the audits of cold stores supervised by the HSE. The audits were unannounced to the cold store operators.

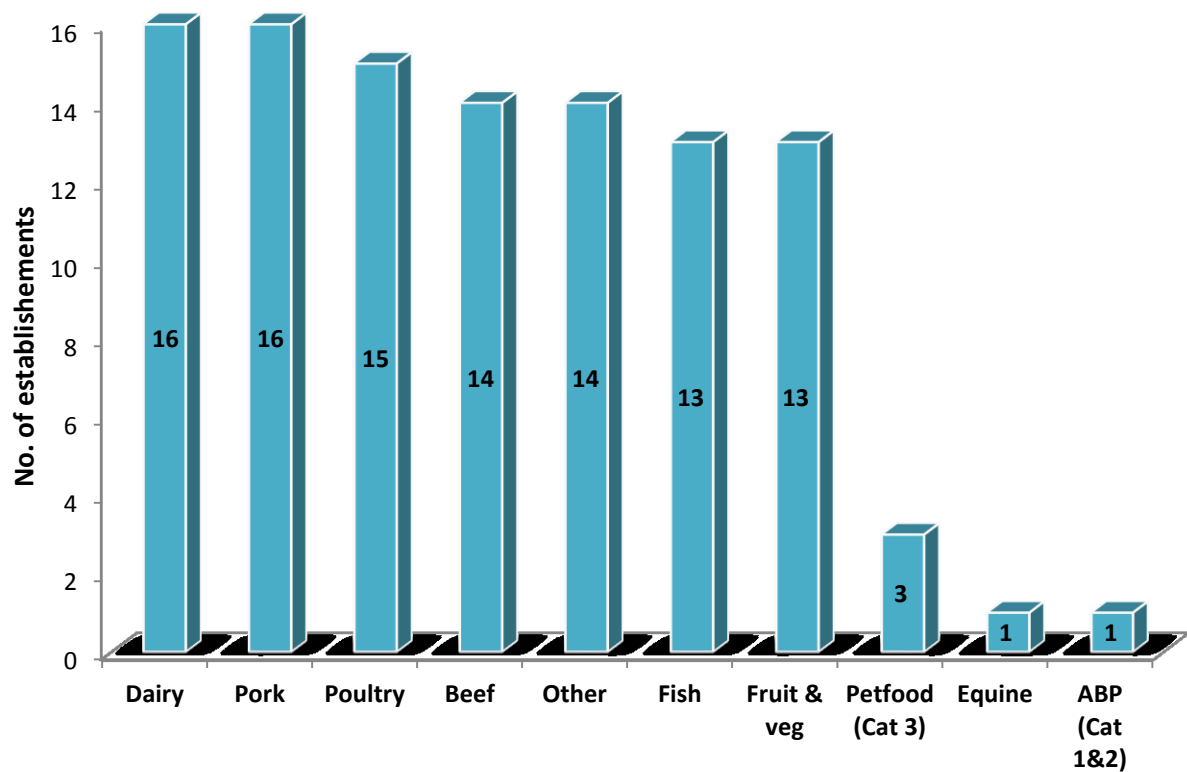
¹ A warehouse management system is a software application that records and manages the movement and storage of materials within a warehouse, including goods receiving, goods dispatch, order picking and allocation.

4. AUDIT FINDINGS

4.1 Products Stored

Many of the commercial cold stores audited had frozen, chilled and ambient storage.

Figure 1: Products Stored



Products categorised as 'other' included frozen bread, pastries and confectionery items, fruit juice concentrates, ready-meals, technical products such as enzymes, game, food contact materials, packaging and milk powders. Animal by-products (ABP) are categorised to reflect the level of risk to public and animal health arising from those ABPs. The description of ABP as either Category 1 or Category 2 is in accordance with the lists laid down in Articles 8, 9 and 10 of Regulation (EC) No 1069 of 2009 laying down health rules as regards animal by-products and derived products not intended for human consumption². Products designated as ABP must be marked or identified as such, to minimise the risk of them re-entering the food chain.

4.2 Sub-letting Chambers to Tenants

In ten of the commercial cold stores audited, the cold store operator had sub-let cold store chambers or dedicated space within a chamber, to tenants. In many of these ten cold stores, the cold store operator had more than one tenant. One cold store operator had ten tenants operating from the establishment. The cold store operator is generally responsible for the temperature control of the sub-let area and maintenance of the chamber. The tenant is usually responsible for physically unloading and re-loading product, as well as intake controls, traceability, stock control etc. Responsibility for housekeeping in the allocated area also varies depending on agreements between the cold store operator and the tenant.

These tenant operations varied from being an 'outpost' of a larger company which was registered or approved in the parent site to small food businesses using the space in the cold store as their sole premises. The nature of these small businesses (many just starting out) and larger businesses using the commercial cold stores to supplement their main establishments during busy periods, means that the tenants subletting space within a cold store can change on a regular basis. From a regulatory viewpoint, the supervision of such complex establishments is more challenging.

4.3 Services Provided to Clients

Modern commercial cold store operators now offer a wide range of services to their clients.

² [Link to Regulation \(EC\) No 1069 of 2009](#)

Table 1: Services Provided to Clients

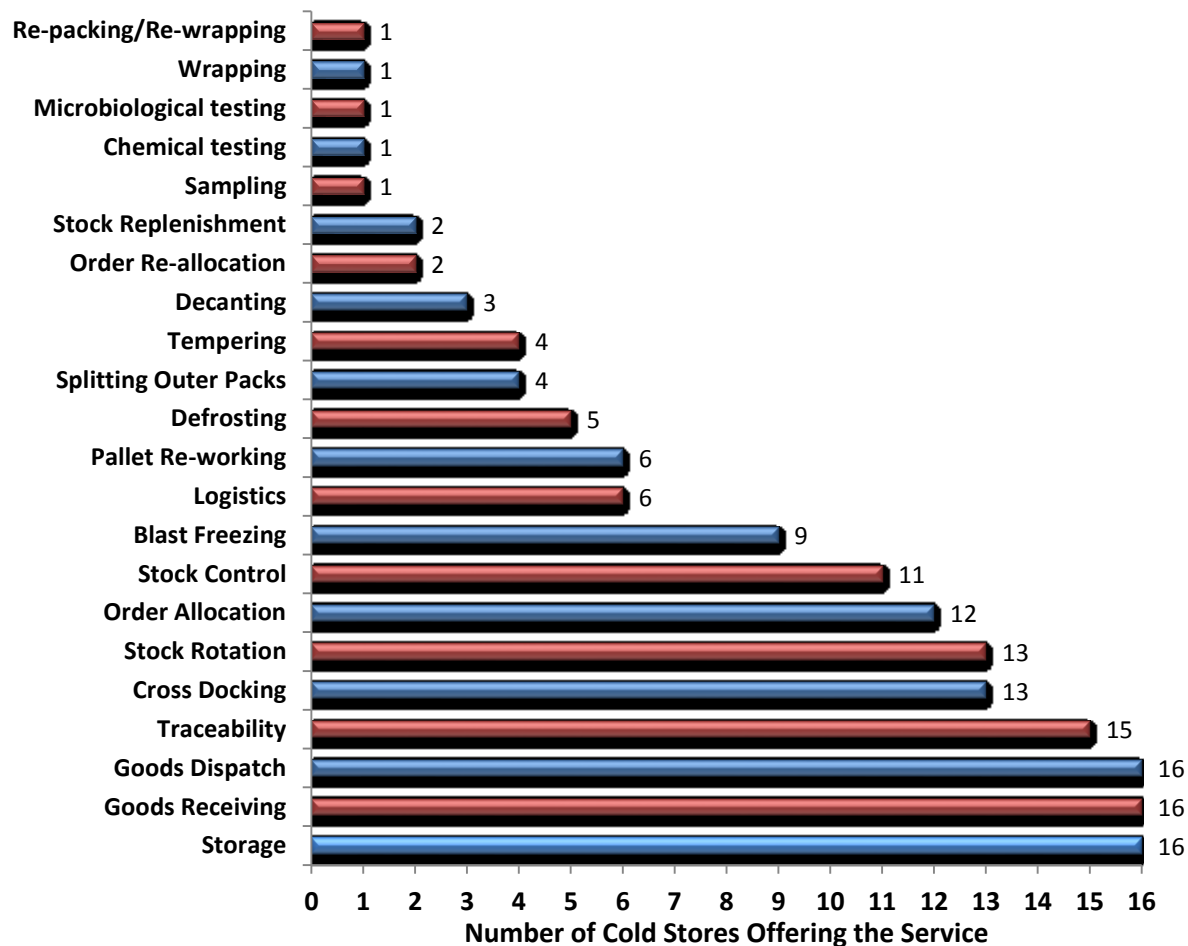
Service Offered	Explanation
Product storage	Storage of product at chilled or frozen temperature
Goods receiving	Receipt of consignments of goods into the cold store
Goods dispatch	Dispatch of consignments of goods from the cold store at the instruction of the client
Traceability	Maintenance by the cold store operator, of traceability of consignments or products one step back and one step forward on behalf of a client
Cross-docking	Cross-docking is a practice in the logistics industry of unloading frozen, chilled or ambient products from an incoming truck and loading these directly onto outbound trucks with little or no storage in between. This activity usually takes place in commercial cold stores outside normal working hours and is undertaken as a way of generating income from the loading bay when it would otherwise not be in use
Stock rotation	Managing rotation of consignments of products on behalf of a client. Many clients require that cold store operators dispatch their consignments on a first-in first-out basis
Order picking/ allocation	Picking and assembling individual components into orders for a client, to send either to the client or to a client's customer
Stock control	The maintenance of stock to an agreed level. This can include ordering stock from a client's supplier by the cold store operator
Blast freezing	The freezing of product by means of a rapid current of chilled air
Logistics	This involves the cold store operator arranging or being directly responsible for the transportation of the goods belonging to a client, onwards to a destination designated by the client
Pallet re-working	Changing product from one pallet type to another. This may happen when products are being packed into containers for shipping as a way of maximising space utilisation in the container
Defrosting	The process whereby frozen product can be stored in a chilled area to allow the temperature to rise to between 0°C and 4°C in order to facilitate subsequent production at a client's establishment.
Splitting outer packs	The opening of outer packaging to facilitate the sale or distribution of smaller quantities of a product, e.g. opening an outer package containing 12 smaller packages, and removing a lesser number of packages to fulfil an order
Tempering	This involves using a quick thaw unit, which is a wind tunnel with fans to move warm air over the surface of products in a controlled pattern; which allows frozen product to be thawed within 12 to 36 hours. A series of probes placed at the core, on the surface and in the air stream, monitor the thawing process and adjust the air temperature and flow to keep the product within predetermined limits during the thawing process. Depending on the products and the client requirements, products can be tempered to between -12°C and 4°C

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Service Offered	Explanation
Decanting	To transfer product from one form of packaging into another, e.g. to decant meat frozen in plastic trays into boxes, or to remove frozen product from cardboard boxes and build it onto a plastic lined pallet, wrapped with a shroud
Order re-allocation	Changes to order destination, consignee, etc. as requested by the client
Stock replenishment	This entails the cold store operator ordering stock as directed by the client, for example from suppliers, or the clients manufacturing/processing facility to maintain an agreed stock level within the cold storage facility
Product sampling	Sampling product for either chemical or microbiological testing on behalf of clients
Microbiological testing	Sampling of client's products and sending them to a designated laboratory for microbiological testing
Chemical testing	Sampling of client's products and sending them to a designated laboratory for chemical testing
Wrapping	The placing of a foodstuff in a wrapper or container in direct contact with the foodstuff concerned, and the wrapper or container itself
Re-packing/Re-wrapping	Changing or replacing the packaging or wrapping on a product

Figure 2: Services Offered



As demonstrated by Figure 2, all of the commercial cold stores audited offered storage, goods receiving and goods dispatch services to clients. Over 50% of the cold stores audited offered clients a range of ten different services.

This expansion in services offered by commercial cold stores has meant that where traditionally, products would have entered the cold store and spent a considerable amount of time stored there, there is now much more movement of product in and out of the cold store and the residence time is shorter. Clients are also making more use of the services offered by cold store operators such as blast freezing, tempering, cross-docking, etc.

In some of the larger commercial cold stores, particularly those offering blast freezing and tempering to clients as services, non-compliances were identified in relation to the labelling, identification and traceability of products. Many of these clients are using the cold store as either the start or end of their processing line. Where clients were using the cold store as the start of their manufacturing process, the goods concerned were usually entered on to an integrated warehouse and stock control system. These systems and the communications between the client and cold store were clearly defined and well organised.

Where however, clients were using the cold stores at the end of their processing/manufacturing activities, the systems and communications were less well defined. Processors were found to be sending fresh products into the cold stores with 'frozen-on' dates already applied (these were typically one day after the processing or packing date). In most cases, it was found that there was little communication between the processors and cold stores around the blast freezing operation and controls on it. The cold store operator was instructed to "blast freeze on receipt". During the audit, two instances were identified where products were being labelled with 'frozen-on' dates (and therefore, corresponding 'best-before' dates) by the processor which were incorrect. In one case, there was a gap of 19 days between the labelled 'frozen-on' date and the date of arrival at the cold store. In the other case, the product was labelled as being frozen on the 26th but had in fact, been received into the cold store and blast frozen on the 22nd. This has been followed up with the supervising agency for these food business operators and the FSAI.

Some clients use the cold store to blast freeze products that are produced in small quantities. The cold store operator is then responsible for the incremental building of these small quantities up to an agreed stock level which is then shipped as part of a larger load. Traceability of these small quantities, often received on a daily basis, is managed by the cold store. One cold store operator had implemented a good system, whereby each box of the product was scanned into the cold store through the blast freezing process and into the outgoing load, at the request of the client. The audit team considered this to be an example of best practice. This had necessitated some integration of the warehouse management system of the cold store and the client production management system to ensure adequate traceability was maintained on each box.

During the audit of one cold storage facility, large quantities of frozen hams were being tempered and defrosted for the Christmas market. Staff from the food business operator who owned the hams were on-site in the cold store, checking and sorting product for client orders. In this case, some of the products were not labelled with an identification (ID) mark either on the packaging or on the outer container. The staff from the food business operator who owned the hams stated that they considered this product to be work-in-progress and so it was not labelled with an identification mark. This does not comply with statutory requirements, as the product had left an approved establishment without an identification mark, as laid down in Regulation (EC) No 853/2004.

Some clients of cold storage facilities send their own staff to re-label products. In one case, this included the re-labelling of products with an extended shelf-life. The label also included an ID mark from an establishment in another Member State in which the product had been cooked and packed. Neither the client nor the cold store operator had informed the DAFM inspector responsible for the supervision of the cold store of this activity. On the day of the audit, action was taken by inspectors from the supervising agency at the request of the FSAI, requiring that this activity cease. The cold store management and client food business operator were informed that this re-labelling practice was not in compliance with legal requirements. The supervising agency responsible for the client's processing establishment requested further information and supporting evidence to support the shelf-life extension. This supporting documentation was received.

In some of the cold stores audited, clients have direct access to the cold store chambers where their products are stored. In many cases, these clients are small business owners and the free access given to them resulted in loss of traceability for the products. This was due to the fact that there is no recording of product being moved into or out of the cold store, e.g. during one audit, the cross-check on the number of pallets recorded in the warehouse management system and those physically in the cold store for a particular client, resulted in a difference of over 500 pallets. This had arisen because while the cold store was responsible for receiving and entering incoming consignments; the client was allowed to remove their product directly from the cold store and did not notify the cold store operator of what products or quantities were being removed.

In one of the cold stores audited, a complex process was being carried out on behalf of a specific client in order to provide stock for the Christmas market. After arrival into the cold store of product in retail packs at chill temperatures and with a 'use-by' date (which was up to six weeks in duration), it was blast frozen and stored at -

18°C. It was then tempered (back to 4°C) in a quick thaw unit as needed, to fulfil specific orders. There was evidence of good communication between the client and cold store operator in the form of thawing plans. However, the documented procedures did not adequately describe all steps in the process.

4.4 Supervision of Establishments Audited

This project involved audits of 13 commercial cold stores which were under the supervision of DAFM and two which were supervised by the HSE. There was one commercial cold store that was under supervision of both the HSE and DAFM. There were no commercial cold stores under the supervision of the SFPA or the local authorities that fit the audit criteria. In the dual supervised cold store, both agencies had undertaken official control inspections in the recent past but neither had communicated their findings to the other. The DAFM inspector was of the view that the establishment was his responsibility solely and had carried out extensive official control activities in the establishment in recent times.

The range of services offered by cold stores to clients has meant that cold stores are now routinely operational outside normal working hours, with many providing clients with 24 hour access. While this clearly has security implications, the regulatory implication of this extended operating period also needs to be considered as supervision of cold stores does not routinely take place outside normal working hours. The suite of services offered to clients in the commercial cold stores audited means that there are much more varied activities being undertaken in these establishments, with a greater number of tenants operating their businesses from the cold store establishment as part of sub-let arrangements. From a regulatory viewpoint, the supervision of such complex establishments is more challenging.

The commercial cold stores audited stored a wide variety of food on behalf of their clients, e.g. frozen fruit and vegetables, bread and pastries, meat, fish, cheese, butter, ready meals, pet food, animal by-products, confectionery, juice concentrate, enzymes, packaging, dry goods, etc.

In ten of the commercial cold stores audited, part of the establishment was sub-let to another food business operator. These tenant operations varied from being an 'outpost' of a larger company, which was registered or approved in the parent site, to small food businesses using the space in the cold store as their sole premises. The nature of these small businesses (many just starting out), and larger businesses using the commercial cold stores to supplement their main establishments during busy periods, means that the tenants within a cold store can change on a regular basis. This can further complicate the implementation of official controls.

The application of official controls in these sub-let businesses was found to be inconsistent. In some cases, the activities of tenants in the cold stores were not supervised by any official competent authority. In one case, there was strong cooperation between the tenant company which was using the space in the cold store as its dispatch store, and the cold store operator. In this case, the same inspector was responsible for official controls in both the processing plant and the cold store and it was clear that there was good and frequent communication between all parties. However, in other cases, the inspectors with responsibility for the main establishment (the commercial cold store) did not enforce official controls in the tenants' businesses. The effect of this could be seen in the non-compliances identified during the programme of audits of these tenants and their dedicated chambers/areas. On questioning, many of the tenants believed that they could operate as an 'outpost' and therefore, had not registered or formally made themselves known to the relevant official control agency.

However, it should also be noted that many of the inspectors believed that the supervision of these tenants was outside their remit either due to the companies' activities or the products involved, e.g. fish, cheese, butter. In some of the audits, the hygiene practices identified by the FSAI relating to the trimming and re-packaging of cheese following sampling were very poor. The supervising inspector did not consider this to be within their area of responsibility. These non-compliances were highlighted to the cold store operator at the time of the audit and corrective action was undertaken and followed up by the supervising inspector.

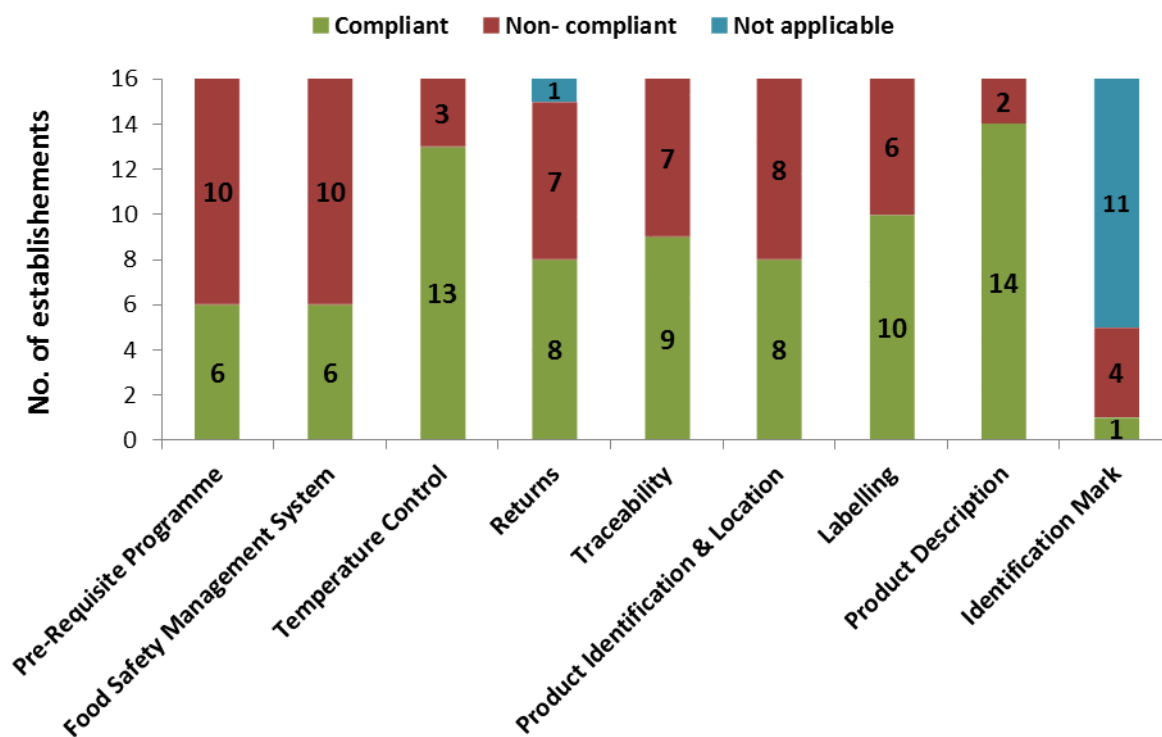
4.5 Compliance with Legal Requirements

Compliance with legal requirements was assessed on a number of levels during each of the 16 audits. Operational controls, documented procedures and records maintained by the cold store operator were audited. These are termed 'compliance checks' and each check was assessed in line with the legal requirements, and then categorised as either compliant or non-compliant. Reasons for non-compliance included inadequate or insufficient operational controls or documentation, non-availability of records or other information on the day of the audit or incorrect information or documentation. In certain cold stores, due to the nature of the business and services offered to clients, not all aspects of the compliance checks were applicable. The controls and documentation relating to the cold store operators' pre-requisite programme and food safety management system; including cleaning, pest control, internal audits and inspections were examined. Temperature control, labelling, product identification in the cold store, control of quarantined and returned products, product description and application of the identification mark were assessed.

In all but two of the cold stores audited, there was an electronic warehouse management system in place. These warehouse management systems were being used by the cold store operators to record and manage information relating to products being stored in their cold store. There was one main software package in use, and a small number of other bespoke systems. The warehouse management system enabled the cold store operators to record a significant amount of detail relating to the consignments entering and leaving their cold store. It also can be configured to record specific locations within the cold store, right down to individual pallet spaces; through the use of a unique identifier. This enables full traceability of products within the cold store including where it is implemented correctly, tracking movement of products from entry, to blast freezing, to storage and finally, dispatch. In one of the cold stores with no warehouse management system in place, there were a number of tenant food business operators that managed their own chambers within the cold store. These were typically small food businesses with paper-based systems for managing traceability. In the other cold store, a mix of paper-based and financial packages were used to manage incoming and outgoing consignments and traceability.

Figure 3 outlines the findings from the compliance checks which were carried out as part of the audits in the establishments.

Figure 3: Compliance Checks



4.5.1 Pre-requisite programmes and food safety management systems

Regulation (EC) No 852/2004 on the hygiene of foodstuffs requires that food business operators shall put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles. These procedures describe how the food business operator ensures that the premises is maintained in an appropriate condition for a food premises, that accurate product traceability is maintained at all times, and that all operations are carried out hygienically and in compliance with food law. In view of the low frequency of official control inspections or audits of these premises, it is critical that these procedures are appropriate and are reliably and consistently carried out. While all of the cold store operators audited had documented to some extent, a food safety management system, not all were fully compliant with the requirements of Regulation (EC) No 852/2004. The relatively high level of non-compliance (63%) relating to pre-requisite programmes and food safety management systems are accounted for by the fact that the documentation was either not available to the audit team, was incomplete, incorrect or out-of-date.

4.5.2 Temperature control

Regulation (EC) No 852/2004 on the hygiene of foodstuffs, Annex II requires that where necessary, suitable temperature-controlled handling and storage conditions are provided. There were three establishments where non-compliances were noted with regards to temperature control.

4.5.3 Returns

Regulation (EC) No 852/2004 on the hygiene of foodstuffs, Article 5 requires that food business operators shall put in place, implement and maintain, a permanent procedure or procedures based on the HACCP principles. Furthermore, this should include identifying the critical control points at the step or steps at which control is essential to prevent or eliminate a hazard or to reduce it to acceptable levels. Control of goods returned to the cold store was audited in 15 of the 16 cold stores, one of the cold stores did not accept any returns. All of the cold stores that accepted returns had documented procedures relating to this activity. Eight of the cold stores had well documented procedures and the associated operational controls in place relating to return of product to the store, were found to be satisfactory. One of the eight cold stores had a very good system in place for control of returned product which included clearly labelled and designated storage areas for the returned product and also included a warning on the warehouse management system to alert staff if this product was allocated to a dispatch order. Seven of the cold stores were considered not to have adequate control over return of product to the cold store, due to lack of labelling and information relating to the returned product, placement of product within the cold store or damage to packaging of returned product.

4.5.4 Traceability

Regulation (EC) No 178/2002 laying down the general principles and requirements of food law, requires under Article 18 that the traceability of food, feed, food-producing animals, and any other substance intended to be, or expected to be, incorporated into a food or feed shall be established at all stages of production, processing and distribution. To this end, such operators shall have in place, systems and procedures which allow for this information to be made available to the competent authorities on demand. It is therefore, necessary to establish a comprehensive system of traceability within food and feed businesses so that targeted and accurate withdrawals can be undertaken

Commercial cold stores typically use their warehouse management systems to facilitate maintenance of traceability. Two of the cold stores audited did not have a warehouse management system in place but traceability checks were carried out. In one of the two cold stores, traceability was based on a paper and financial system, and the checks were satisfactory. In the other cold store, which had a number of tenant food business operators, traceability checks were carried out with those tenant food business operators that were present on the day of the audit. The levels of traceability varied, with one food business operator having a well-managed system in place. Other food business operators did not manage traceability adequately and so this cold store was recorded as being non-compliant.

In the 14 cold stores with warehouse management systems, traceability was assessed by selecting a number of specific pallet locations during the audit of the cold store and requesting the cold store operator to provide information relating to the product stored in those specific locations on the system. The cold store operators were not made aware that these checks comprised a mix of products and locations noted by the audit team, as well as empty pallet spaces and product which was labelled as being on hold or quarantined. This information was required by the audit team at the time of the audit, and information was requested regarding traceability one step back and in cases where shipments from a consignment had taken place, one step forward as well. The traceability checks in eight cold stores were found to be satisfactory. In six of the cold stores with warehouse management systems, the traceability checks were unsatisfactory. The non-compliances in those six cold stores were due to reasons such as:

- Personnel not capable of utilising the warehouse management system to query locations and traceability for specific products without being provided with supplementary information, e.g. client name

- Incomplete information recorded in the warehouse management system, e.g. during busy periods, product information, location or movements in or out of the cold store not being recorded
- Information not being provided in a timely manner

4.5.5 Product identification and location within the cold store

Product identification and location within the cold store included an examination of whether the cold store operator had implemented a system of specific pallet locations. This was married to their warehouse management system as well as looking at the presence of unlabelled or unidentifiable product in the cold store and how information relating to this type of product had been maintained. In eight of the cold stores, non-compliances were identified relating to this compliance check. This was mainly due to locations recorded for products on the warehouse management system not matching the physical location of the product in the store, e.g. if the product was physically moved and the new location was not recorded on the system. In some instances, no location had been assigned to the product on the system and it was overly-reliant on warehouse staff remembering where the product had been physically placed within the cold store. In one of the cold stores audited, an example of best practice was noted whereby the warehouse management system included the blast freezers and tempering rooms as locations, in addition to the usual storage chambers. This allowed for full tracking of product through the premises including, through the use of scanning, time spent in the blast freezer.

4.5.6 Labelling

The labelling check assessed a number of products in the cold store and whether or not they were in compliance with the legal requirements regarding labelling. The labelled product assessed in ten of the cold stores was found to be in compliance. In the remaining six cold stores, issues were identified relating to splitting of outer packs without ensuring that the labelling information was maintained, unlabelled and unidentifiable product in the cold store, insufficient information on the label and products labelled with incorrect information, e.g. incorrect 'frozen-on' dates.

4.5.7 Identification mark

Regulation (EC) No 853/ 2004 laying down specific hygiene rules for food of animal origin as amended, requires that an identification mark must be applied to product of animal origin, and should be applied before the product leaves the establishment of production. However, when a product's packaging and/or wrapping is removed or it is further processed in another establishment, a new mark must be applied to the product. In such cases, the new mark must indicate the approval number of the establishment where these operations take place. In five of the establishments, identification marks were being applied. In one of these establishments, product of animal origin was being blast frozen and decanted out of its packaging. The cold store operator was applying their identification mark to the product in compliance with the requirements set out in Annex II, Section 1 of Regulation (EC) No 853 of 2004. In the four remaining cold stores, there was evidence of identification marks being applied to products, which were not in compliance with the requirements of Regulation (EC) No 853/2004. In each of these four cases, this involved the application of an identification mark from another establishment, three of which were within Ireland. This activity was being carried out by staff either from a tenant company or by staff working in the cold store for a client. The audit team and the accompanying supervising inspectors seized the labels that were being

used. The food business operators involved were informed that this was a breach of legislation and that the activity must cease. The cold store management were informed that this was not an acceptable practice and that they must not allow it to take place in their establishment. Each of these activities were also followed up with the establishments from which the identification mark originated in the case of the three Irish establishments and with the owner of the product in the other case, by the supervising agency and the FSAI.

Regulation (EC) No 853/ 2004 laying down specific hygiene rules for food of animal origin as amended, requires that in the case of packaging containing cut meat or offal, the mark must be applied to a label fixed to the packaging, or printed on the packaging in such a way that it is destroyed when the packaging is opened. This is not necessary however, if the process of opening destroys the packaging. When wrapping provides the same protection as packaging, the label may be affixed to the wrapping. There was evidence of products being supplied into cold stores with inadequate seals. Furthermore, there were products without identification marks on them as required by Regulation (EC) No 853/2004 and in one case, product with two identification marks on it. These products originated from approved establishments in Ireland and the EU. Products with missing or incorrect identification marks were observed in many of the cold stores audited during this project. There is inconsistent practice across the industry, as when this labelling issue was raised as part of goods inwards checks; the cold store operators have been informed by the client that this is not a problem in other cold stores or other jurisdictions.

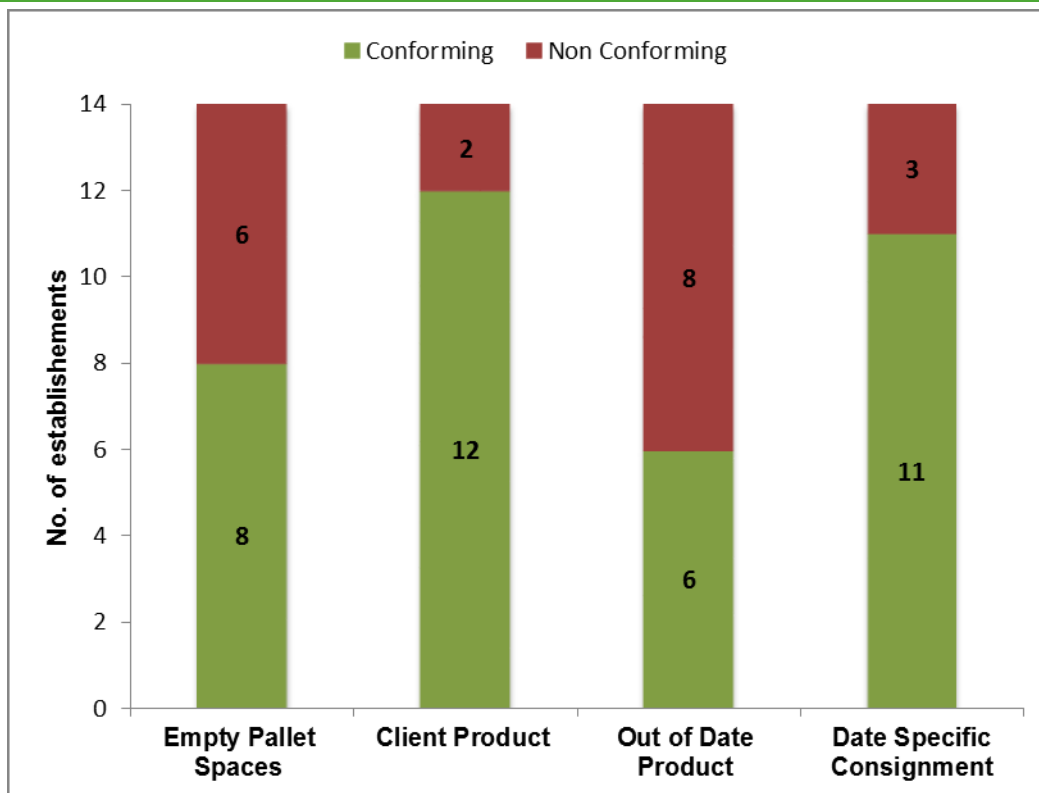
4.5.8 Other non-compliances

During the audits of the cold stores, while attention was focused towards the specific compliance checks outlined in the preceding sections, other non-compliances were also noted which related to the requirements set out in Annex II of Regulation (EC) 853/2004 on the hygiene of foodstuffs. These deficiencies related mainly to the structure of the establishment and operational hygiene within the cold store.

4.6 Warehouse Management System

A suite of four specific checks was carried out in relation to the warehouse management system, which was in place in 14 of the 16 cold stores. Two of the smaller cold stores did not have warehouse management systems in place. The results presented in Figure 4: Checks on the Warehouse Management System are therefore, based on the results from these 14 cold stores. The checks carried out related to recording of empty pallet spaces, product held on site for a specific client, out-of-date product and also a check on incoming consignments for a specified period of time.

Figure 4: Checks on the Warehouse Management System



4.6.1 Empty pallet spaces

Within the warehouse management system, there is a standard query that can be run on empty pallet spaces. The audit team requested this report from the system and used it where available, to cross-check products in these 'empty' locations. In eight of the cold stores, these reports were produced efficiently and no issues were identified on physical cross-checking by the audit team. Six of the cold stores were deemed to be non-conforming regarding this check. It was not possible to carry out this query either as a result of the manner in which the warehouse management system was set up, due to lack of staff knowledge on the system or the results of the query were not accurate when examined physically in the cold store by the audit team.

4.6.2 Client product

The cold store operator was requested to produce a list of product held on site for a particular client and this was then cross-checked with physical product which had been noted in the cold store by the audit team. These lists were produced by 12 of the cold stores from the warehouse management system during the audit and were found to be satisfactory on cross-check by the audit team. In two of the cold stores, the list produced was not accurate as clients were allowed access to remove their products directly from the cold store, and did not notify the cold store operator as to what was removed so that the warehouse management system could be updated. Also, in one of the two cold stores, the operator advised that during busy periods, the incoming consignments were not recorded on the warehouse management system.

4.6.3 Out-of-date product

The warehouse management system allows for recording an expiry date and the cold store operators were requested to produce a list of the out-of-date products in their cold stores. Eight of the fourteen cold stores that had a warehouse management system in place were not able to produce this report from their system. In some cases, this was due to the fact that expiry dates were not being recorded on intake or that the information was incomplete and so the report was not accurate. Six cold stores were able to produce the report in the timely fashion, but only one cold store reviewed products which were nearing the end of their shelf-life and routinely notified this to clients. One cold store operator had integrated their warehouse management system with their main client's production management system. This allowed the production information, such as batch numbers, production date, 'best-before' date, etc. to transfer across to the warehouse management system when the product was scanned in to the cold store. It also allowed the client visibility of their product while it was in the cold store.

4.6.4 Date specific consignment

The audit team selected a specific time period and requested the cold store to produce a report of all incoming consignments for that two week period. Eleven of the fourteen cold stores produced the report during the audit. In the remaining three cold stores, it was not possible to carry out this query. This was due to the manner in which the warehouse management system was set up, a lack of staff knowledge on the system or the results of the query were not accurate as not all consignments had been entered onto the warehouse management system.

4.7 Product Ownership

During the audits, the cold store operators were asked about ownership of the products stored within the cold store. Each cold store operator advised that they considered that the ownership of the product remained with the client, and this was reflected in the terms and conditions of operation of many of the cold stores. There were a number of cold stores where commercial relationships existed between clients. This resulted in 'cross trades' being carried out within the cold store, whereby on instruction from one client, product is transferred to the account of another client. In many of the cold stores, there were not adequate operational controls or documented procedures in place to provide assurance that this is a well-managed activity.

This cross-trading occurs for offal in particular, where loads are being incrementally built up for shipping to third countries, i.e. outside the EU. In some cases, this was recorded as an electronic transfer on the warehouse management system, rather than a physical movement of the product in the cold store. During traceability checks, there were products which had entered the cold store for a particular client but due to inter-trading between clients, were now identified on the warehouse management system as belonging to a different client. These 'cross trades' further complicate the management of product ownership and traceability and can also complicate enforcement action being taken.

During one audit, a quantity of returned product was identified by the audit team and traceability information was requested from the cold store operator. The product had not been entered on the warehouse management system for traceability purposes and the cold store staff were not aware of its presence or source. The product was detained by the inspector with responsibility for the establishment. Following enquiries made by the inspector, there were five possible 'owners' of the returned product. The product was downgraded to Category 3 waste and was removed from the cold store. This action was verified by the veterinary inspector.

4.8 Approval of Establishments

During the audit, the species and activities for which the cold store had been granted approval (in the case of the DAFM establishments) were reviewed and in the majority of cases, it was found that the approval did not cover all species or activities being carried out at the time of this audit. A review of approvals for all cold stores should be undertaken by the supervising agency to ensure that only approved activities are carried out.

In one cold store, two-thirds of the activities carried out related to an adjacent approved sister-plant. Product from the end of the processing line was blast frozen, sorted, palletised and placed into storage in the cold store by the staff from the sister plant who were also responsible for maintaining traceability of the product. At present, the cold store is approved as a stand-alone cold store. The approval of the sister plant does not cover the activities being undertaken by its staff in the cold store. This arrangement results in uncertainty as to which approved food business operator would be legally responsible where non-compliances arise. This also arises in sub-let units in approved cold stores.

4.9 Breaches of Legislation

A total of 71 breaches of the following legislative requirements were observed during the programme of audits:

- One breach of Article 16 of Regulation (EC) No 178/2002 laying down the general principles and requirements of food law, relating to presentation
- Seventeen breaches across eight cold stores of Article 18 of Regulation (EC) No 178/2002 laying down the general principles and requirements of food law, relating to traceability
- Twenty-four breaches across 13 cold stores of Article 5 of Regulation (EC) No 852/2004 on the hygiene of foodstuffs, relating to hazard analysis and critical control points
- Twenty-three breaches across 15 cold stores of Annex II of Regulation (EC) No 852/2004 on the hygiene of foodstuffs, relating to general hygiene requirements for all food business operators
- Six breaches across five cold stores of Annex II of Regulation (EC) No 853/2004 laying down specific hygiene rules for food of animal origin, relating to requirements concerning products of animal origin

5. POSITIVE PRACTICES OBSERVED DURING THE AUDIT

Numerous examples of best practice were observed during the audits.

In the case of one of the cold stores with a tenant operating its dispatch activities from a sub-let chamber, the same inspector was responsible for the cold store and the processing plant. Good linkages had been established between the supervising inspector and the cold store operator and it was clear that good communication and clarity of roles had been established. Also, in this cold store, the SFPA had a role in conducting controls on fish/fishery products. DAFM and SFPA inspectors had clearly outlined their roles to the cold store operator and communicated when either identified issues which affected the other inspectorate's role. This led to stronger and better regulation.

The designation of blast freezers as a 'location' on the warehouse management system in one of the establishments was a good example of best practice and it enabled a high degree of visibility on the freezing process (the time product enters and leaves the blast freezer is visible on the system). For this to be implemented in a practical manner, scanning of product into the establishment and through the various locations on the warehouse management system, is required.

One cold store operator had integrated their warehouse management system with their main client's production management system. This allowed the production information, such as batch numbers, production date, 'best-before' date, etc. to transfer across to the warehouse management system, when the product was scanned in to the cold store. It also allowed the client visibility on their product while it was in the cold store.

One of the cold store operators had implemented a system whereby all hard copy paperwork was scanned and saved into the warehouse management system. This meant that all information relating to a particular consignment was available quickly and efficiently.

6. CONCLUSIONS

The range of services offered by cold store operators to clients means that there are much more varied activities being undertaken in these establishments, with a greater number of tenants operating their businesses from the cold store, and routinely operating outside normal working hours.

The audit team identified many examples of Irish and EU origin meat, which were non-compliant with the legal requirement that packages of fresh meat must be sealed with the identification mark in a manner which ensures that the mark will be destroyed if the package is opened.

The 71 breaches of legislation identified during the programme of audits highlight the need for the cold store operators to improve compliance with food law relevant to their business. In some of the audits, fundamental deficiencies relating to the basic management of product traceability, associated information and documentation were identified. In many of these instances, warehouse management systems were in place. However, they were not being used to their full capabilities and in some instances, the information entered and stored in the systems was not correct.

In some of the cold stores audited, there were tenant food business operators which were operating unsupervised. Upon questioning by the audit team, many of these food business operators were operating without having applied for approval from or registration with the relevant competent authority (DAFM or the HSE). Many stated the view that the requirement for approval or registration as a food business was not applicable to them as they were a tenant of the cold store. In some of the cold stores audited, there were several tenants operating in such a manner, and the supervising inspector did not undertake official controls in these food business operators, limiting instead, their official control activities to the main cold store operator.

This audit identified deficiencies in the official controls in place in the cold stores audited. The frequency of official controls applied in these cold stores is not, in the opinion of the audit team, commensurate with the risk associated with the activities and complex arrangements associated with these establishments. In the past, cold stores were at the periphery of the food chain, either storing raw materials for processors or finished product. The activities undertaken in cold stores are now more closely aligned with those of processors or wholesalers and as such, the risk categorisation and frequency of official controls should be reviewed accordingly.

There were examples of official controls being applied in an effective manner in some of the audits of the cold stores. This was a result of the supervising inspector having an in-depth knowledge of the business activities

being undertaken in the establishment, which included the inspector being familiar with systems used to track products, such as the warehouse management system. In the majority of audits conducted, the inspectors were not familiar with the full suite of activities being carried out in, or tenants operating from, the establishment. Neither were they familiar with the warehouse management systems in place. The frequency of official controls also had an impact on the effectiveness of the controls, as in many cases, tenants and activities would change in the cold store between official control inspections.

Gaps in the application of official controls were identified during the audit. Some inspectors' limited official controls to specific product types, e.g. meat, and did not undertake any official control activities relating to other products. In particular, this was evident in relation to cheese and fish. During one of the audits, the audit team observed the re-packaging of cheese which was being carried out in an unhygienic manner and in an unsuitable location. The supervising inspector advised the audit team that he considered this activity to be outside his remit.

Due to the complexity of commercial arrangements and related operational practices in these cold store establishments, it can sometimes be difficult to establish with certainty, legal liability for compliance with food law.

The legal requirements for traceability one step up and one step down the supply chain, without a legal requirement for internal traceability, makes it difficult for competent authorities to insist on accurate, focused traceability in such establishments.

7. RECOMMENDATIONS

1. Cold store operators must put procedures in place to ensure full compliance with the requirements of food law.
2. Food businesses sub-leasing space within cold stores must be separately registered or approved, as required by food law.
3. Warehouse management systems should cover the full range of activities in operation in the cold store. The information inputted to the system should be done in a timely manner and all products in the cold store should be traceable on the system.
4. The illegal practice of applying identification marks from other approved establishments to products in cold stores must cease immediately.
5. The practice of splitting outer packs without ensuring that the labelling information is maintained, having unlabelled and unidentifiable product in the cold store, product with insufficient information on the label and products labelled with incorrect information, must be corrected immediately.
6. Corrective action is required where non-compliances were noted with regards to temperature control, structural deficiencies and poor hygiene practices.
7. Contraventions in relation to pre-requisite programmes and food safety management systems including incomplete, incorrect and 'out-of-date' documentation must be remedied.
8. Documented arrangements between cold store owners and tenants must be in place and made available to the relevant inspector.
9. A guide to good practice for cold store operators and food businesses operating from cold stores should be developed and agreed with the sector.

10. A full review of the official controls being carried out in cold stores is required to ensure that controls are: applied with sufficient frequency, effective and include all aspects of the establishments operations, including those being carried out by tenant food business operators and staff of clients operating within the establishment.
11. A review of training required by inspectors supervising cold stores is required to ensure that inspectors are familiar with warehouse management systems and operational practices, to ensure official controls are effective.
12. The inspectors in a geographical area of a cold store should have cross-agency meetings to discuss cross-trading and activities between their plants, in particular relating to those establishments that either use the cold store as the beginning or end of their process as well as those food business operators with establishments elsewhere that sub-let space within the cold store.
13. A review of the risk categorisation of cold stores needs to be undertaken to ensure that the activities now being carried on have been factored into the risk rating exercise.



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