

## Part 4

### STORAGE AND TRANSPORTATION

Produce in the production area is generally stored at the packing facility or at a commercial cold storage. Many operations have both a packing operation and cold storage under the same roof. Auditors would normally assess both operations during the same audit. In some cases, the product may be held in storage for some time before being packed.

In some cases, a commercial operation provides cooling facilities and loading for finished products ready to be shipped to the terminal warehouse or wholesale distribution center. Part 4 applies to both the storage associated with a packing operation and the cold storage facility used in the production area, or in an interim area between the production area and the terminal market.

#### Storage Areas, Product, Containers, and Pallets

	Questions	Points	YES	NO	N/A	Doc
4-1	The storage facility is cleaned and maintained in an orderly manner.	5				

Remove as much as practicable all visible debris, soil, dirt and unnecessary items from product storage areas on an ongoing basis. These areas must be cleaned on a regularly scheduled and "as needed" basis.

For some commodities such as onions, it may not be possible to maintain the area at the same level of cleanliness as it would be for a fruit or a leafy vegetable commodity. Auditors must consider the product when assessing this question.

When it appears that there is no proactive effort to keep the storage area clean and orderly this question must be answered NO. This question cannot be answered N/A.

	Questions	Points	YES	NO	N/A	Doc
4-2	Bulk storage facilities are inspected for foreign material prior to use and records are maintained	5				<b>R</b>

This question is specifically intended for bulk storage areas used for products such as potatoes or onions. It may include warehouses, cellars or areas where piles of product are to be stored and does not apply to product in containers. Auditors should observe or review documentation to verify that bulk storage areas are inspected and cleaned prior to use. For products stored in totes, bins or other packages this question may be answered N/A.

	Questions	Points	YES	NO	N/A	Doc
4-3	Storage rooms, buildings, and/or facilities are maintained and sufficiently sealed or isolated to be protected from external contamination.	10				

Storage areas shall be sufficiently sealed or isolated to protect stored product from windblown contaminants, rodents, rainwater, etc. This question cannot be answered N/A.

	Questions	Points	YES	NO	N/A	Doc
4-4	Storage grounds are reasonably free of litter and debris.	5				

Grounds in the immediate vicinity of all storage areas should be kept clear of waste, litter and improperly stored garbage. The area around the facility should be maintained in a way to discourage the breeding, harboring and feeding of pests, such as rodents and reptiles.

It would be impractical for auditors to expect to see absolutely no debris at all. If the auditor feels that the amount or type of debris represents a possible risk of microbial contamination or is sufficient to attract pests to the area, this question should be answered NO.

Piles of wood, such as pieces of broken pallets, garbage or waste collected or scattered along the storage grounds, food products, food wrappers, cigarette butts or soda or drink containers scattered across the storage grounds, are all examples of possible reasons to answer this question NO. This question cannot be answered as N/A.

	Questions	Points	YES	NO	N/A	Doc
4-5	Floors in storage areas are reasonably free of standing water	5				

Maintain adequate surface drainage to reduce breeding places for pests. Auditors should consider weather conditions (rain vs. dry) and standing water incident to receiving or storage operations when answering this question. These conditions would not be considered as detrimental unless there is indication that the water will not properly drain.

Auditors must judge such things as recent rain fall in the area which may have left a puddle or water which dripped from a recently used hose which was not completely shut off as excusable examples of standing water and answer this question YES. If the standing water does not look relatively fresh, such as being greenish from algae growth; or the operator has not taken any proactive action to drain or dry up the source, this question must be answered NO. This question cannot be answered N/A.

	Questions	Points	YES	NO	N/A	Doc
4-6	Possible wastewater spillage is prevented from contaminating any food handling area by barriers, drains or a sufficient distance.	10				

Wastewater from toilets and hand washing sinks or other sources not intended to be used to wash or rinse product must not be permitted to run into the storage or transportation area if a spill occurs. Distance or other barriers should protect the storage areas and flow zones. Drains which are in place must drain away from the storage and transportation area. Sanitary sewer pipes and drains should not leak.

This question must be answered NO when it is observed that possible spillage of wastewater is likely to run into and contaminate the storage and transportation area, the flow zone or the product. This question cannot be answered N/A.

	Questions	Points	YES	NO	N/A	Doc
4-7	There is a policy describing procedures which specify handling/disposition of finished product which is opened, spilled or comes into contact with the floor.	15				P

Auditors should review the SOPs for the facility to identify if there is a procedure in place which identifies how product that spilled or comes in contact with the floor is handled. Spilled product that comes in contact with the floor can become contaminated and should not be used without some sort of corrective action such as washing or disposing of the product. This question cannot be answered as N/A.

	Questions	Points	YES	NO	N/A	Doc
4-8	Packing containers are properly stored and sufficiently sealed to be protected from contamination (birds, rodents, pests and other contaminants ).	10				

Packing containers and other packing materials which are not ready for immediate use should be stored in a way that protects them from contamination by any source (pests, dirt and water condensation, etc.). Packing containers stored outside should also be covered in some manner to protect against contamination.

Auditors should observe where and how packing containers are stored. Containers which are stored in a manner that may lead to contamination by any reasonable means will result in a NO answer for this question.

If there are no packing containers in the storage area this question may be answered N/A.

	<b>Questions</b>	<b>Points</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>Doc</b>
4-9	Pallets, pallet boxes, totes, bags, bins, cellars, storage rooms, etc. are clean, in good condition and do not contribute foreign material to the product.	5				

It is not uncommon to see an area in the receiving yard specifically designated for cleaning containers and pallets. Containers used for ready-to-eat fresh produce should be cleaned and/or sanitized. If produce is field packed, care must be taken to prevent contamination of containers or bins by exposure to soil and manure.

Auditors must observe the condition of pallets and containers being used and also those being stored for future use. The auditee must be questioned to determine the disposition of broken or dirty pallets/containers. If auditors observe the use of dirty or broken pallets/containers, or if an effort is not being made to clean or stop using such items, the answer to this question should be NO. This question cannot be answered N/A.

	<b>Questions</b>	<b>Points</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>Doc</b>
4-10	Product stored outside in totes, trucks, bins, other containers or on the ground in bulk is covered and protected from contamination.	10				

Storage and transportation facilities may either be integrated into the packing operation or a standalone facility that accepts raw or finished product (Le. an apple shed cold storage room vs. a potato bulk storage facility). It is important that product that is being temporarily stored or held outside of a storage facility be protected from possible sources of contamination.

Steps shall be taken to reduce possible contamination by other vehicles, contamination from birds, rodents or other means. Covering loads, temporarily storing loads under roofs or using enclosed trailers are examples of good practices. Auditors may see operations that store product under mesh covers/awnings. Mesh coverings over these types of staging areas do not provide adequate protection against contamination and do not meet the requirements of this question.

Auditors shall observe loads being delivered to the packing or storage facility to adequately answer this question.

	Questions	Points	YES	NO	N/A	Doc
4-11	Non-food grade substances such as paints, lubricants, pesticides, etc., are not stored in close proximity to the product.	10				

Non-food grade chemicals shall not be stored in close proximity to stored product. Close proximity in this instance means close enough to the product that the chemicals, if leaked or spilled, would reach the product. Ideally, these types of chemicals shall be stored in a separate secured area or storage cabinet which would prevent any possible spillage from entering the product storage area.

	Questions	Points	YES	NO	N/A	Doc
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4-12	Mechanical equipment used during the storage process is clean and maintained to prevent contamination of the product.	5				D
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Any equipment used in the storage facility shall be clean and properly maintained. If equipment becomes soiled due to normal use during the production day, the auditor should not consider this as failing to meet the cleanliness requirement. Equipment shall be maintained to prevent leaking fluids that could potentially contaminate the product, and loose or broken parts must be repaired to prevent foreign objects from contaminating the product. Any equipment or portions of equipment that directly touches raw product must be maintained in a higher degree of cleanliness.

### Pest Control

	Questions	Points	YES	NO	N/A	Doc
4-13	Measures are taken to exclude animals or pests from storage facilities.	10				D

All packing and storage facilities should establish a pest control program to reduce the risk of contamination by rodents and other animals, including pets. This program should include regular and frequent monitoring of affected and treated areas to accurately assess the program's effectiveness.

The auditee should consider the use of screens, wind curtains, bird deterrent tape and traps to minimize risk of product contamination. Pet dogs, cats or other animals should not have free run of the facility.

Auditors must review the facilities' SOPs to determine if there is a proactive effort to exclude

animals and pests from the facility. This question cannot be answered N/A.

	Questions	Points	YES	NO	N/A	Doc
4-14	There is an established pest control program for the facility.	10				D

A pest control log must be maintained that includes inspection dates, inspection reports, and procedures implemented to eliminate any problems. Frequent monitoring of affected and treated areas must take place to determine the effectiveness of the treatment applied. Generally, all traps and bait stations will be marked and flagged by numbers or some type of coding system. It is likely that there will also be a map of the premises that shows the location of such bait stations and traps.

All bait stations containing poison attractants must be located outside the facility. Traps or other non-poison methods should be the only control program located within a structure.

Auditors should be aware of and look for an organized method of pest detection and elimination. This question cannot be answered N/A.

	Questions	Points	YES	NO	N/A	Doc
4-15	Service reports for the pest control program are available for review.	5				R

Generally, traps and bait stations will be regularly checked and have documentation showing when this was completed. This documentation may consist of a report or inspection log for all stations or may be a sticker or other marking on individual stations throughout the facility.

Auditors must review documentation and records that pertain to the pest control program. In some cases, it may be necessary to obtain this information from an independent pest control company contracted to provide these services. This question can only be answered N/A when Question 4-14

is answered NO.

	Questions	Points	YES	NO	N/A	Doc
4-16	Interior walls, floors and ceilings are well maintained and are free of major cracks and crevices.	5				

Potential entryways for pests into the facility must be eliminated by blocking/repairing areas such as holes in walls, doors, flooring, vents, etc. To assess this question, auditors must look closely at the inside walls, doors, floors and ceilings of an operation. Small cracks or crevices incident to structure age should be disregarded, unless it is obvious that pests are in the area. Cracks and crevices do not necessarily need to lead to the outdoors for infestation to occur. Certain pests can easily use areas inside walls as a living space and the food products within the facility provide a food source.

The facility should be well maintained to repair or eliminate problem areas. There should be no loose insulation materials protruding from the walls or ceiling. This question must be answered NO when the facility is not well maintained or there is easy access or harborage by pests through large or numerous cracks. This question cannot be answered N/ A.

### Ice and Refrigeration

	Questions	Points	YES	NO	N/A	Doc
4-17	The water used for cooling and/or making ice is potable.	15				R

Ice or cold water (hydro-cooling) is often used by some commodity packers to reduce product temperature. Source water for this procedure should be potable to reduce the risk of food contamination.

Auditors must investigate the source of the water/ice and review records to verify that there is no indication of microbial contamination of the water source. In some cases, ice may be manufactured on-site. In other cases, it may be provided by another entity. In either case, the water must be potable. If water is not potable this question must be answered NO. If ice or chilled water is not used, this question may be answered N/A.

	<b>Questions</b>	<b>Points</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>Doc</b>
4-18	Manufacturing, storage and transportation facilities used in making and delivering ice used for cooling the product have been sanitized.	10				R

Ice making facilities may be located on site or contracted out and supplied by an outside source. To reduce microbial risks in either case, the auditee must provide records indicating there is a sanitizing schedule for the ice production and storage facilities including any means of necessary transportation. This should also include equipment (conveyors, belts, augers, etc.) used to move ice within the facility or into trucks.

	<b>Questions</b>	<b>Points</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>Doc</b>
4-19	Climate controlled rooms are monitored for temperature and logs are maintained.	5				D

Climate control systems must be working properly to minimize the survival and replication of

food borne microbes. Although there are some microbes that will live and reproduce under cold or freezing temperatures, the majority do not.

Auditors must assess the operation by noting the room temperature as it relates to the product being stored. Some products are stored at 32° F, while others require higher temperatures due to cold sensitivity. Auditors should check available temperature logs. These should cover all storages at the audit site. These will lend credibility to the proper temperature operation of the facility. When stored product requires a certain temperature range and the system does not maintain those temperatures, this question must be answered NO.

Auditors should keep in mind that some products are frequently stored at temperatures higher than typically refrigerated products. In these cases, there are no temperature requirements and refrigeration systems may not be present. This question may be answered N/A as appropriate.

	<b>Questions</b>	<b>Points</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>Doc</b>
4-20	Thermometer(s) are checked for accuracy and records are available for review.	5				D

Thermometers used in cold storage areas and for determining product temperatures should be regularly checked for accuracy and operators must maintain records to validate this procedure. In some cases, thermometers are computerized with operation checked from a computer terminal. In other cases, a computer automatically verifies the temperature of the room on an ongoing basis.

This question must be answered NO when there are no verification checks or no records are being maintained. This question can only be answered N/A when product is not stored in coolers/refrigerated units.

	Questions	Points	YES	NO	N/A	Doc
4-21	Refrigeration system condensation does not come in contact with produce.	10				

The majority of refrigeration equipment is located inside the storage rooms. It is not uncommon for the equipment to drip liquid, usually water and whatever other substances that might be on the equipment. This condensation is a result of the combination of temperature and humidity within the room.

In some cases, it is possible for product to be stored underneath the refrigeration equipment. Whenever it is likely that produce would come into contact with the dripping condensation, the produce must be protected from the likelihood of contamination.

Auditors should review the storage of produce and note whether or not any condensation would come into contact with the product. The question would be answered NO when condensation will come into contact with the produce.

	Questions	Points	YES	NO	N/A	Doc
4-22	Refrigeration equipment (condensers, fans, etc.) is cleaned on a scheduled basis.	10				D

Refrigerated storages should be cleaned on a regular basis. This will reduce the amount of dust and dirt build-up and further reduce the possibility of contamination. Auditors should review the cleaning schedule documentation. This question can only be answered N/A when there is no refrigeration equipment.

	<b>Questions</b>	<b>Points</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>Doc</b>
4-23	Iced product does not drip on pallets of produce stored below.	10				

Many vegetable products are frequently packed with ice or crushed ice put on the tops of the cartons or pallets to keep them cold. This would include broccoli, sweet corn and cantaloupes. In storages where pallets are stacked more than one high or when there are racks to stack pallets one above the other, the iced product should be stored on the bottom. If a product is stored beneath an iced product, it must be protected from the dripping of melting ice.

Auditors must review the storage, ask appropriate questions about storage of products packed with ice and assess the results.

### **Transportation and Loading**

	<b>Questions</b>	<b>Points</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>Doc</b>
4-24	Prior to the loading process, conveyances are required to be clean, in good physical condition, free from disagreeable odors, from obvious dirt/debris	10				P

All parties involved in the transport of fresh produce should help ensure that sanitation requirements for conveyances are maintained throughout the transportation chain. Trucks and transport containers must be inspected for cleanliness, odors, and debris before the loading process begins.

Drivers and operators should be aware of the contents of previously carried loads and consider this information when determining current usage. For example, trucks recently used to transport animals or animal products would increase the risk of contaminating fresh produce if not properly cleaned prior to produce loading. Auditors should not expect to see conveyances in like-new or sterilized condition. Conveyances should be acceptably clean.

Auditors should review auditee documentation to verify that there is an active policy in place addressing carrier condition. The Auditee must maintain records verifying that the overall physical condition of conveyances is being checked. If the auditee cannot provide records verifying that these procedures are being performed, this question must be answered NO. This question cannot be answered N/A.

	<b>Questions</b>	<b>Points</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>Doc</b>
4-25	Produce items are not loaded with potentially contaminating products.	10				p

The Guide recommends that produce items should only be shipped with other produce items. They should definitely not be shipped with fertilizers, meats, poultry, or fish products. There may be times when produce must be shipped with non-produce items other than those mentioned. Shippers should adequately protect produce items from cross contamination by segregating and separating these items in the conveyance by a physical barrier. This question cannot be answered N/A.

	Questions	Points	YES	NO	N/A	Doc
4-26	Company has a written policy for transporters and conveyances to maintain a specified temperature(s) during transit.	10				P

The auditee must work with transporters to ensure adequate control of transport temperatures from loading to receiving. Transporters should be aware of the temperature requirements for produce being hauled and avoid delivery of mixed loads with incompatible refrigeration requirements.

Auditors should recognize that not all products require refrigeration during transport. In certain cases, shippers may require or specify a higher temperature for transportation than that recommended for storage conditions. Shippers should recommend temperatures according to the product and conditions for transport. In general, manifests should be marked with the temperature range that the shipper requires the carrier to maintain.

If there are no transportation temperatures required by the auditee, or there is no indication of required temperatures on the manifest, this question must be answered NO. This question may be answered N/A when specific shipping temperatures are not suggested for the product (nuts, for example).

	Questions	Points	YES	NO	N/A	Doc
4-27	Conveyances are loaded to minimize damage to product.	5				P

All fresh produce should be carefully packed and loaded to minimize physical damage and to

reduce the potential for contamination during transport. A shipper should have an SOP describing the use of acceptable safe loading practices.

Produce which is damaged during harvesting, packing or transportation is more susceptible to microbial contamination than undamaged product. Precautions should be taken to minimize or prevent shifting of the load during transit. Load bracing, straps/belts and pallet wrapping are examples designed to keep containers in place. Shippers should strive to organize each load with a realistic attempt at securing packages and preventing spillage during transit. This question cannot be answered N/A.

**Worker Health and Personal Hygiene**

	<b>Questions</b>	<b>Points</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>Doc</b>
4-28	Employee facilities (locker rooms, lunch and break areas, etc.) are clean and located away from storage, shipping and receiving areas.	10				

Facilities used by employees to take breaks, prepare to go to work, eat lunches, etc. must be clean and separate from the storage, shipping and receiving areas. Some operators will have a separate room designed and identified for eating, others will identify an area in a corner of the packing house building or somewhere outside of the immediate packing area and supply it with tables. All of these are acceptable. The intent is that workers do not eat or take breaks within the packing area.

Applicable portions of 29 CFR, Part 1910.141 state:

**(3) Housekeeping.**

*(i) All places of employment shall be kept clean to the extent that the nature of the work allows.*

*(ii) The floor of every workroom shall be maintained, so far as practicable, in a dry condition. Where wet processes are used, drainage shall be maintained and false floors, platforms, mats, or other dry standing places shall be provided, where practicable, or appropriate waterproof footwear shall be provided.*

*(iii) To facilitate cleaning, every floor, working place, and passageway shall be kept free from protruding nails, splinters, loose boards, and unnecessary holes and openings.*

This question cannot be answered as N/A.

	Questions	Points	YES	NO	N/A	Doc
4-29	When there is a written policy requiring the use of hair/beard nets in the storage and transportation areas, it is being followed by all affected employees and visitors.	5				P

Hair nets and beard nets are worn in order to keep stray hair from entering the food and food containers. In addition, wearing of these when the hair is very long reduces the risk of catching hair in machinery.

Operations that have a written policy must follow the policy. Auditors must review the policy and observe to determine if it is being followed. This question may be answered N/A when there is no written policy.

	<b>Questions</b>	<b>Points</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>Doc</b>
4-30	When there is a written policy restricting the wearing of jewelry in the storage and transportation areas, it is being followed by all affected employees and visitors.	5				P

Jewelry can be both a safety and a food safety hazard. It can become dislodged from the person wearing it and fall into the food item or the container. It can get caught on machinery and injure the worker. Jewelry, especially watchbands if not cleaned properly, can harbor microorganisms.

Operations that have a written policy must follow the policy. Auditors must review the . policy and observe to determine if it is being followed. This question may be answered N/A when there is no written policy.

	<b>Questions</b>	<b>Points</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>Doc</b>
4-31	Records are kept recording the source of incoming product and the destination of outgoing product which is uniquely identified to enable traceability.	10				D

The Bioterrorism Act of 2002 requires certain handlers of foods to keep records that allow the handler to keep trace of produce "one step forward" and "one step back" within the food chain. For packing facilities, storage and transportation facilities and wholesale distribution/terminal

warehouses, record keeping that keeps trace of the source of incoming produce and the destination of outgoing produce is a critical component of a documented traceability program. Traceability markings shall be at the container/master container level, and shall include other identifying marks as outlined in the company's traceability program.

Auditors must explain all questions for which a NO or N/A answer was noted.

Any additional comments pertaining to individuals or to observations made during the audit should be made here. Auditors must be specific when making comments about YES answers to questions, as an additional statement here may indicate that the question might be better answered NO instead.

**Total points earned for PART 4 = \_\_\_\_\_.**

**Total Possible** = 250 *The total number of points possible for this section.*

**Subtract "N/A"** - \_\_\_\_\_ *Enter the additive number of N/A points (+ points) here.*

**Adjusted Total** = \_\_\_\_\_ *Subtract the N/A points from the Total possible points.*  
*Multiply the Adjusted Total by .8 and show it as the Passing Score.*

**Passing Score** \_\_\_\_\_

**(please circle one) Pass / Fail**