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ASSOCIATION OF FOOD AND DRUG OFFICIALS
GUIDELINES
FOR THE
TRANSPORTATION OF FOOD PRODUCTS

I. PREFACE
Information and recommendations contained in this guideline are intended to be voluntary for the safe and secure transportation and handling of food products from production through delivery. As such AFDO does not guarantee or warrant, expressly or by implication, that compliance with this guideline will prevent damage, spoilage, accidents, or injuries to persons or property. Any inference of such a guarantee or warranty is expressly and specifically disclaimed.

It is the sole responsibility of any company or person using this guideline and not the responsibility of AFDO to ensure that such company or person is proficient in the operations and procedures discussed in this guideline. Moreover, adoption of any of this guideline does not ensure compliance with legal or regulatory requirements. Those involved in the transportation of foods are advised to become familiar with all relevant and applicable local, state and federal regulations and to ensure that they comply with such requirements as appropriate.

II. INTRODUCTION

This guideline addresses food safety measures that should be taken by shippers and haulers from the point of receiving and transporting raw materials and food production through delivery of the final food product. This guideline is also intended to secure and protect all food products from the numerous potential sources of contamination, such as dirt, debris, excessive heat or other adulterants that may occur during transportation. Temperature control is of importance to prevent the rapid and progressive growth of disease-causing organisms that may be naturally present in foods as well as those introduced through incidental contamination in the operation of all vehicles transporting foods.

Everyone in the food distribution system is responsible for ensuring that all raw materials and food products are safe, wholesome and unadulterated. Therefore, as part of this system, those responsible for transportation and delivery should implement every possible and reasonable security measures to ensure the integrity of the raw materials and food products throughout the supply chain.
III. DEFINITIONS


B. **Adulteration** – A food is deemed to be adulterated if:

1. It bears or contains any poisonous or deleterious substance which may render it injurious to health;
2. It bears or contains any added poisonous or added deleterious substance;
3. It is a raw agricultural commodity and it bears or contains a pesticide chemical which is unsafe within the meaning of Section 408(a) of the Act as amended, section 14(a);
4. It consists in whole or part of a diseased contaminated, filthy, putrid, or decomposed substance;
5. It is otherwise unfit for food;
6. It has been produces, prepared, packaged, or held under unsanitary conditions whereby it may have been contaminated with filth, or whereby it may have been rendered diseased, unwholesome, or injurious to health;
7. Its container is composed, in whole or in part, or any poisonous or deleterious substance which may render the contents injurious to health;
8. Damage or inferiority has been concealed in any manner;

(NOTE: These definitions are not the only forms of adulteration as expressed in the ACT.)

C. **Potentially Hazardous Foods** – Foods that consist in whole or in part of milk or milk products, eggs, meat, poultry, fish, shellfish, edible crustacean, or supporting rapid and progressive growth if infectious or toxigenic microorganisms. The terms include foods, which have a pH level of 4.6 or above or a water activity (aw) value of 0.85 or greater.

D. **Safe** – Refers to the health of man or animal.

E. **Sanitization** – Effective bactericidal treatment by a process that provides enough accumulative heat or concentration of chemicals for enough time to reduce the bacterial count, particularly pathogens, to a safe level on utensils and equipment.

F. **Transportation** – Movement of food from the point of manufacture or where all raw fruit, vegetables, and other commodities are harvested, to a destined site for retail, wholesale, or service from one retail food store to another place.

G. **Vehicle** – Any truck, motor truck/trailer, bulk trailer, car, van, bus, railcar, aircraft, boat, ship, or other means by which food is transported from one location to another.

H. **Water** – means potable water.
IV. FOOD PROTECTION AND SECURITY

A. Proper and Reasonable Food Transportation Measures

Most food is transported by truck; however, food products may be transferred to and from other modes of transportation during shipment and held at intermediate warehouses as well as at transfer or handling facilities, such as airports, break-bulk terminals and rail sidings. Because transportation and storage are vital links in the farm-to-table food chain, effective control measures are essential at each point in the food distribution chain.

B. General Provisions – Raw Ingredient and Food Product Safety

1. All transportation personnel involved in the loading, handling, storage of food products and security must be trained in food hygiene, sanitation, personal hygiene and vehicle inspection. They should be able to judge potential risks, take reasonable preventative and corrective actions and ensure effective monitoring and supervision to prevent intentional and unintentional contamination from occurring.

2. Raw ingredients and foods are deemed adulterated if they have been held under unsanitary conditions whereby they may have been adulterated with filth, been rendered unwholesome or injurious to health, etc. It includes potentially hazardous food capable of supporting rapid and progressive growth of infectious or toxigenic microorganisms, which are not transported at recommended product temperatures for such raw ingredients and foods.

3. At all times, including while being transported, all raw ingredients and food should be protected from cross-contamination between foods and from potential contamination by insects, chemicals, rodents, waste products, toxic material, unclean equipment, tank cleaning products, unnecessary handling, or other agents of public health significance.

4. Adequate raw ingredients and food temperatures must be maintained. All raw ingredients and foods of a perishable nature should be transported only in vehicles provided with sufficient refrigeration and freezing capabilities, if necessary, for product temperature maintenance.

5. Raw ingredients and food items that are spoiled or that are in damaged containers that may affect the undamaged product because of spoilage, container damage, or other public health consideration, shall be removed from the transporting vehicle and stored properly pending satisfactory disposition by a regulatory authority.

6. Raw ingredients and foods should not be transported with toxic or hazardous materials, including drugs. To prevent any cross contamination, different types of raw ingredients and food, e.g. chicken and produce, should not be transported in subsequent loads without proper sanitation of the cargo area.

7. Raw ingredients and all foods, including seafood, hanging primal cuts, quarters, or sides of meat, poultry, etc., should be protected from contamination by use of packaging or covered containers while being transported. Exclusions to this requirement may be certain raw fruits and vegetables.

8. All transportation vehicles should be secure to prevent tampering when not in use.
9. Loading and unloading areas should be configured, cleaned, disinfected (where appropriate), and properly maintained to prevent product contamination.

C. General Provisions – Food Product Security

1. All personnel should also be familiar with your security plan. Security drills should be conducted regularly to test and verify the effectiveness of the plan. The plan policies and procedures should be continually reviewed.

2. Implement identified security measures at each point to ensure the protection of raw ingredients and food products from the time it’s loaded for shipment through delivery to each destination.

3. The plan should include a system to identify and track food products at any time during transportation and distribution such as the use of tamper-resistance seals corresponding to specific shipments and their documentation.

4. Verify that contracted transporters e.g. air, ground, maritime and rail, along with storage/warehouse facilities have a security program in effect. Consider including specific security measures in contracts and verify that measures are being met.

5. Include procedures for the immediate trace and recall of adulterated products from trade and consumer channels. This should be the product owner’s responsibility, not the trucking firm, unless one and the same.

6. Have a system in place to track salvaged, reworked and returned products. Include procedures for handling threats to and actual cases of raw ingredients and product tampering. This should be the product owner’s responsibility, not the trucking firm, unless one and the same.

7. Include procedures for the safe handling and disposal of contaminated products. Identify where and how to separate suspected products.

8. Develop and implement methods to check and document condition of raw ingredients, product and packaging upon receipt at destination.

9. Establish a safety and security policy and procedures for rejection of packages and products that are not acceptable, can’t be verified against bills of lading or contain unacceptable changes to shipping documents. Have a monitoring strategy and record keeping system in place to document steps taken.

10. Establish policy and procedures for allowing truckers, rail crew, etc. to enter the facility and monitor their activities while on the property.

11. Regularly update a list of local, state and federal emergency contacts, local Homeland Security contacts and local public health official contacts. Develop procedures for notification of appropriate authorities if an event occurs.

12. Identify all entry and exit points available to emergency personnel in your security plan.

D. General Provisions - Food Storage Areas
A storage/warehouse facility should permit easy access to all areas for cleaning. The facility should be adequately insulated and have adequate temperature control for its capacity. Unauthorized persons should be prevented access through the use of locks, fences, etc. There should be an effective, systematic program for preventing environmental contamination and infestation by insects, vermin, etc.

V. VEHICLES

A. Design and Construction

1. Trailers and Other Trucks

   a. Vehicles should be designed and built to make locking and sealing easy, protect the cargo against extremes of heat and cold and prevent infestation by pests. All doors should be locked or sealed to eliminate the possibility of contamination.

   b. Vehicle design should permit effective inspection, cleaning, disinfection and temperature control. Interior surfaces should be made of materials that are suitable for direct food contact and easily cleanable. For example, interior surfaces may be made with stainless steel or be coated with food-grade epoxy resins.

   c. Vehicles used to transport raw ingredients, foods, whether first-line items or outdated goods should be maintained in a clean and sanitary condition to protect the raw ingredients and food products from contamination.

   d. The cargo compartment of any vehicle used in transporting raw ingredients and food should be smooth, impervious to moisture, corrosion resistant, nontoxic, in good repair, and constructed to permit adequate sanitation. The vehicles should be constructed to prevent waste products such as iced poultry wastes from leaking onto the ground surfaces during transport.

   e. Open (uncovered) commercial trucks should not be used for transporting raw ingredients and food unless approved by the responsible regulatory agency.

2. Bulk Tanker Trailers

   a. The shell, heads, manways, fittings, connections and appliances with product contact surfaces should be minimum alloy #304 Stainless Steel, low carbon;

   b. Weld finish should be W-3; (3-A Standard No. 3A-05-14);

   c. All parent metal finish on product contact surfaces should be 2B; (3-A Standard No. 3A-05-14);

   d. The entire tank surfaces should be clean-bore (no baffles);

   e. If compartments are permitted they should be equipped with double bulkheads with evacuated airspace between bulkheads;

   f. With the exception of center-discharge (belly drop) tanks, all tanks should have a positive drain (minimum 4 inch slope from front to back of tankers);
g. All internal accessories should be capable of being disassembled to clean product contact surfaces;

h. Internal valves should be acceptable;

i. Clean-out openings should be appropriate;

j. Gaskets should be removable and non-porous; and

k. Vehicle-mounted product transfer equipment if used, should meet the requirements established for the tanker.

B. Cleaning and Sanitizing Vehicles

1. Trailers and Other Trucks

a. Regular, effective cleaning and sanitizing of vehicles used in transporting raw ingredients and food minimizes the probability of food contamination, accelerated food spoilage, and the transmission of disease organisms or toxins to employees and consumers. Effective cleaning removes soil and prevents the accumulation of residues that may decompose or support the rapid growth of pathogenic organisms or production of toxins.

b. All vehicles and cargo compartments should be kept clean and free from dirt, debris and any other substance or odor that may contaminate the product. Vehicles should be disinfected as needed.

c. Cleaning and sanitation procedures should be specified in writing. Different cleaning procedures may be necessary for different food products being transported. The type of product transported and the cleaning procedure used should be recorded. Generally, wash water should be at least 180° F (82° C) and an approved sanitizer may be used to reduce the number of microorganisms and dissolve any debris adhering to interior surfaces.

d. Carriers should ensure that all equipment used to perform the cleaning and sanitizing services should be in good, sound, safe and clean working condition.

e. Cargo pallets, load securing devices, and loading equipment should be kept clean and free of potential food contamination and be regularly washed and sanitized. Equipment used in transferring food products such as trucks, conveyors and forklifts should be well maintained and kept in a sanitary condition.

f. Many Federal, state and local regulations contain sanitary requirements to ensure that adequate cleaning facilities are provided to permit necessary and effective cleaning and sanitizing of raw ingredient and food vehicles. These should be reviewed for guidance when developing cleaning and sanitizing procedures.

2. Bulk Tanker Trailers

a. Acceptable media for cleaning, depending on prior load, and which may be applied alone or in combination include the following:
   i. Steam;
ii. Hot or cold water;
iii. Detergent, where appropriate, according to customer’s specifications and the product hauled, observing manufacturer’s and chemical suppliers recommendations on pH;
iv. Caustic, according to customer’s specifications observing manufacturer’s recommendations on pH; and
v. Air drying, using an appropriate filter.

b. Overall criteria to be applied as appropriate to the media used:
   i. The term “water” means potable water;
   ii. When used alone or as part of another media, the term “hot water” should mean that water and cleaning agents applied to product contact surfaces should be appropriate to clean and sanitize internal surfaces;
   iii. Only cleaning compounds as covered by appropriate food additive regulations as established by FDA or USDA should be used in any cleaning media or combination thereof; and
   iv. At the minimum, the following accessories and components should be removed and disassembled from the unit for cleaning – gaskets, external valves, vents and caps as applicable.

c. Seals should be applied to all cargo tank access points after cleaning and prior to shipment of the tank to the facility for product loading.

C. Dedicated Vehicles – Trailers and Other Trucks and Bulk Tanker Trailers

1. A vehicle transporting trash, garbage, soiled linen, or other similar loads should not be used for transporting foods. However, if back hauling is permitted by the regulatory agency, the vehicle must be inspected and approved by the agency for cleanliness before hauling food.

2. Transport vehicles, containers and conveyors should be designated and marked “for food use only,” and be used only for transporting foods. If feasible, vehicles should be restricted to a single commodity. This reduces the risk of cross contamination from previous cargoes.

3. Food being transported from or to another location shall be in covered containers or otherwise wrapped or packaged to ensure protection from contamination.

D. Vehicle Examination before Loading

1. Trailers and Other Trucks
   a. All vehicles should be examined for deficiencies that would prevent their use as raw ingredients and food product carriers.

   b. The trailer or truck body should be sufficiently insulated and be in good repair with no holes in the body that might allow heat, dust, or other adulterants to enter the cargo area. Residues from previous cargoes as well as from cleaning and sanitizing compounds should be checked for.

   c. The cooling unit should be in good repair and operating and both the truck driver and plant personnel should check the functioning of the trailer refrigeration unit before loading refrigerated loads. Trailers and trucks should be pre-cooled at least 1 hour before loading to remove residual heat from the insulation and inner lining of the trailer as well as from the air of the trailer. For pre-cooling, the doors should be closed
and the temperature setting of the unit should be no higher that 41° F (5° C) for perishable loads and 0° F (-18° C) or less for frozen goods.

d. Inspect trailers prior to loading to determine that the air chutes, if used, are properly in place and that the ribbed floors are clear of debris so that adequate air circulation can occur. Trailer doors and seals should be examined to ensure that they can be secured and that there are no air leaks.

e. When shipping a mixed load of products, such as both frozen and refrigerated products, it should only be accomplished by using a trailer with compartments that accommodate different temperature or other handling requirements.

2. Bulk Tanker Trailers – Visual Inspection

a. The interior of the tanker should be inspected visually. The interior of the tanker should be clean and free of cracks and corrosion, which can harbor contaminants. If condensate is present or the interior is otherwise unacceptable, check with your superior prior to loading. Internal damage or corrosion, foreign objects, incompatible product residue, mold and moisture are potential causes for rejection. Inspect the inside of the tank for evidence of residue of prior cargoes or flaking, which indicates inadequate cleaning/rinsing of the tanker or unacceptable prior cargoes. Be especially alert to those areas hard to inspect visually, such as the top of the inner portion of the tank.

b. The presence of off-odors or any residual material when opening the dome cover should be reported to appropriate plant management immediately.

c. It is recommended that shippers/receivers use their own pumps and hoses. If the tanker pump and hoses are used, they should meet all applicable tanker guidelines. If the tanker’s pumping system is to be used for loading, all hoses and pumps should be visually inspected. Special attention should be paid to the pumps located on the tanker, as the tanker may not be dedicated to foodservice use and may not have been cleaned when the trailer was cleaned. If pumps and/or hoses carried on the tanker are to be used, they should be indicated as having been cleaned on the wash station certificate. Tanker mounted blowers, used for the transfer of dry commodities should not be cleaned, but move only air.

d. Inspect all seals, gaskets, pumps, valves, hoses and hose tubing for cleanliness, integrity and proper capping.

e. The company should have a visual inspection form for plant employees to check off during tanker inspection. The form should have an accept/reject notation and a space for the employee and/or appropriate signatures.

f. A clear company policy should be established to designate authorized personnel for acceptance of incoming transportation equipment. In addition to this guideline, a company may provide its employees with additional information and forms for use in acceptance of transportation equipment.
3. Bulk Tanker Trailers - Washing

a. The tanker should be identified for use if there are specific regulation requirements, such as juice, seafood, meat, poultry, etc. and/or if there are specific customer requirements.

b. Confirm that access points were sealed at the wash station with numbered, tamper-evident seals to guard against subsequent contamination of the cleaner tanker before delivery. Tanker wash facilities, shippers and consignees should be authorized to remove and replace seals. This should include at least all major points of entry and discharge. Sealing points may include the dome cover, tank outlet, vent cap, pump inlet, pump outlet and hose tube covers.

c. In the event that transfer hoses and/or the shipper or consignee supplies piping, seals need not be applied to hose tubes mounted on the tanker. If seals are present and were broken by enforcement personnel, documentation must be produced verifying such action.

d. Tankers hauling food grade commodities should be washed on a regular schedule regardless of whether or not they have hauled food.

e. All wash documentation, including wash certificates or tags and bills of lading, should be reviewed and seal identification checked and verified.

f. Seal numbers should be recorded on the wash ticket or a suitable document designed for that purpose and verified by the receiver when inspecting the tanker. Any discrepancy should be reported to management immediately. If the driver indicates that it has been necessary to transfer the lading from one tanker to another after washing, contact appropriate plant management.

g. The cleaning certificate issued by the wash station should contain the name of the product last hauled determined via the last shipping documents and should be reviewed and copied for filing. If no cleaning certificate is presented, management should be consulted.

h. If washing is required, a copy of the wash ticket, noting the prior commodity, should be presented to the outbound tanker operator. The carrier should also provide wash schedules/wash histories for a specific tanker upon request.

E. Staging of Loads

1. Proper staging of loads is especially important when there are loads of products with different temperature requirements or different delivery destinations. Dock foreman should document that all raw ingredients and food products are lower than 41° F (5° C) or lower before loading. Raw ingredients and food products should not be allowed to remain on the loading dock in warm weather in order to prevent the product temperature from rising above 41° F (5° C) for perishable loads and 0° F (-18° C) or less for frozen goods.

F. Loading

1. Trailers and Other Trucks
a. All raw ingredients and food products should be protected from exposure to environmental contaminates such as microbes, dust, moisture or other physical contamination.

b. Raw ingredients and food products should be kept refrigerated and protected from temperature changes. All persons involved in the transportation, storage and handling of these products are responsible for keeping them at appropriate temperatures and preventing any break in the cold chain.

c. Maintain the appropriate temperature of the pre-cooled raw ingredients and food products by maintaining the time of loading or unloading, conducting the loading and unloading in an appropriately chilled environment and reducing the amount of surface contact of the raw ingredient and food products with floors and walls of the storage areas or loading equipment.

d. Appropriately packaged raw ingredients and food products can be stacked, provided that air circulation is sufficient to maintain the temperature of the products during shipment.

e. Raw ingredients and food products should be at the desired transit temperatures before loading. The boxes and pallets should be secured within the vehicle and pallets should be center-loaded off the walls of the vehicle.

f. Use spacers on sidewalls and at the ends of trailers as well as pallets on the floor so that proper air circulation can be maintained.

g. Keep loading time as short as possible to prevent temperature changes (increases or decreases) that could threaten the safety or quality of food products.

h. Close and secure doors immediately after the truck/trailer has pulled away from the dock.

2. Bulk Tanker Trailers

a. If the tanker is acceptable for loading, sufficient care should be exercised during loading to ensure that the integrity of the product and tanker are maintained.

b. After loading the tanker should be closed and tamper-evident security seals affixed to any access ports, which were sealed during inspection to preclude tampering with or adulteration of the product during shipment. Seal numbers should be recorded on the bill of lading or other appropriate document.

c. A copy of the incoming wash certificate with information about the previous cargo should be provided to the outbound operator if the tanker has been cleaned prior to loading. Food ingredients such as food-grade chemicals should be identified by the proper shipping name (FDA or DOT regulations.)

d. Shippers should insure that they have provided the operator with any emergency action information required. Identification will assist the receiver and those responsible for wash station operations in determining
the clean-up procedures and assure that tankers dedicated to food shipments remain available.

e. When all information is recorded, sign the bill of lading indicating the shipment may proceed. A company policy should be established to designate authorized personnel for certifying proper loading of outbound transportation equipment.

G. Mixed, Partial and Less-Than Loads

1. Partial and mixed loads increase the frequency and duration of open doors, leading to a greater possibility of temperature fluctuations and exposure to tempering.

2. Other factors affecting temperature include the time of loading and unloading, the number of stops, the total length of the haul from origin to destination and the outside temperature.

3. During periods of warm weather, loading and unloading should be done in the evening or early morning to minimize the likelihood of products warming.

H. In-Transit

1. Checking Integrity of the Load during Transit

   a. Check refrigeration equipment and for leakage of heating or cooling fluid onto the raw ingredients and food products. It is highly recommended that the temperature and function of the refrigeration unit should be monitored at least every 4 hours. If there is a unit malfunction the problem should be corrected by an authorized refrigeration mechanic before the temperature of the load rises.

   b. Check for breakdown of temperature control equipment. Use time-temperature recording, indicator or integrator devices, if they are available, to monitor the condition of the raw ingredients and food products. Check the devices every 4 hours.

2. Checking Products during Interim Storage

   a. Maintain logbook documenting raw ingredient and food product condition upon arrival and during storage. Ensure proper temperatures are maintained during storage of the raw ingredients and food products.

I. Unloading

1. Trailers and Other Trucks

   a. Raw ingredients and food products should be inspected and sorted before being accepted at any point during transportation.

   b. Develop and implement methods to check and document condition of products and packaging upon receipt at destination. Examine time-temperature recording devices, indicating or integrator devices and determine if raw ingredients or food products were subjected to temperature abuse after packaged and shipped.
c. Include procedures for the safe handling and disposal of contaminated raw ingredients and food products. Identify where and how to separate contaminated raw ingredients and foods products.

d. Establish policy and procedures for rejection of raw ingredients and food products and packages that are not acceptable, can’t be verified against a bill of lading or contain unacceptable changes to a bill of lading. Have a monitoring plan and record-keeping system in place to document steps taken.

e. Do not accept raw ingredients and food products suspected of being adulterated. Move raw ingredient and food products from the loading dock into cold storage immediately to minimize product exposure to heat and contaminants.

2. Bulk Tanker Trailers

a. When receiving a loaded tanker, obtain a copy of the bill of lading and confirm the cargo and security seal numbers. If seal numbers do not match or the seals appear to have been tampered with, notify appropriate management immediately. Do not open the tanker or begin unloading.

b. Review the information provided on the copy of the wash ticket and evaluates the prior load information to insure that proper food, food-grade commodities or acceptable non-food products have been previously carried in the tank. If the prior cargo was not acceptable material, appropriate plant management should be contacted.

c. If all documents and seals are in order, begin your inspection of the tanker and all attendant equipment, including pumps and hoses, for cleanliness and state of repair.

VI. RECOMMENDED PRACTICES FOR HANDLING FOOD PRODUCTS

A. Dry Foods

1. The use of aluminum alloys in the construction of shell, heads and accessory equipment is appropriate;

2. Clean-out openings are appropriate;

3. All gaskets should be removable and non-porous; and

4. Product transfer equipment, if vehicle mounted to accomplish pressure unloading, should be appropriate.

B. Refrigerated and Frozen Raw Ingredients and Food Products

1. All vehicles should be:

   a. So constructed and properly insulated that, when equipped with appropriate refrigeration units, they will be capable of maintaining an air temperature of 41°F (5°C) for perishable loads and 0°F (-18°C) or less for frozen goods throughout the load in all movements.

   b. Equipped with an appropriate temperature-measuring device to indicate accurately air temperature inside the vehicle. The dial or reading element
of the device should be mounted in a readily accessible position outside the vehicle.

c. Equipped with air leak-proof cargo spaces, including tight fitting doors and suitable closures for drain holes to prevent air leakage.

d. Racked, stripped, baffled, or otherwise so constructed as to provide clearance for air circulation around the load, unless of cold-wall or envelope type construction.

e. Be reasonably free from any dirt, debris, or offensive odors when placed for loading.

2. Route delivery trucks should comply with all the provisions of Item 1 above, and, in addition, should be equipped with curtains or flaps in the doorway area, or with port doors, to minimize loss of refrigeration during delivery stops.

C. Refrigerated or frozen raw ingredients and food products should be securely packaged before they are offered for transportation.

D. Carriers should provide their personnel with appropriate testing thermometers and instruction in proper procedures to determine that the raw ingredients and food products they receive are kept in a refrigerated or frozen state.

E. No raw ingredients and food products should be loaded in such manner in any vehicle that it would interfere with the free flow of air onto or out of the refrigeration unit, nor with the free flow of air around the load.

F. The vehicle’s refrigeration unit should be turned on and pre-cooled before loading. The doors should be kept closed during any period when loading and unloading operations cease or are interrupted.

G. The thermostat on the vehicle’s refrigeration unit should be set at 41°F (5°C) for perishable loads and 0°F (-18°C) or lower for frozen goods.

H. After loading has been completed and the vehicle doors closed, the carrier’s equipment should be checked prior to departure to ensure that the refrigeration system is in proper working order.

I. Self-refrigerated containers and other self-contained units utilized in making shipments of refrigerated or frozen raw ingredients and food products via aircraft, Railway Express, pick-up trucks, and other non-refrigerated vehicles should be constructed as to give the product adequate protection against physical damage in transit and be equipped with a refrigerant or refrigerating system capable of maintaining the raw ingredients and food products in a refrigerated or frozen state during the anticipated movement. All such containers should be free from dirt and debris.

J. Shellfish

Conditions to be maintained in the transportation of shellstock and shucked shellfish are:

1. The shellstock and shucked product (oyster, clams, and mussels and whole scallops) shall be protected from contamination by the other cargo through partitioning, horizontal separation, or other isolation methods. No other
cargo may be placed on or above the shucked or shellstock products unless all cargo is packed in sealed, crush resistant, waterproof containers.

2. Shellstock and shucked product shipments should be palletized (except in bulk). Use pallets when the vehicles do not have a channeled floor. Mixed cargoes of seafood, other than shellstock or shucked product, shall be palletized.

3. Interstate shipments of shellstock or shucked shellfish products shall be made by mechanically refrigerated vehicles maintained at, or below, 45° F., except as allowed under the exemptions noted below. This type of vehicle should be used in intrastate commerce when transporting shellstock or shucked shellfish products. A suitable time temperature recording device shall accompany each shipment.
   a. If shellstock is being transported directly from a certified harvest area, by licensed harvesters or growers, to a certified shellfish shipper, and if the shellstock is within the harvest matrix as set by the state authority, the shipment should be exempt from the above requirements.
   b. If the shipping time for shellstock or shucked product is no more than four (4) hours, the shipment may use ice; mechanical refrigeration units or other acceptable means capable of maintaining an ambient air temperature of 45° F (7° C) or below. These exemptions should apply to both intra- and interstate shipments and should only be applied when the shipper is certified with a state authority enforcing the National Shellfish Sanitation Program, Model Ordinance.

4. The shipper should seal the load with a tamperproof seal.

5. The vehicle in which the shellstock or shucked products are shipped shall be maintained in a sanitary condition.

6. When containers are used for shellstock shipments they shall be clean.

D. Potentially Hazardous Foods

1. During transportation potentially hazardous food should be maintained at 41° F (5° C), or below, for cold foods, or 140° F (60° C), or above, for hot foods. Foods exempt from this include items such as milk, eggs and shellfish (this exemption should be limited to shellstock, shucked shellfish should be 45°F (7°C) or less) which by regulation allows them to be received at 45 °F (7 °C).

2. Frozen food should be held at an air temperature of 0° F (-18° C), or below, and shall not exceed a product temperature of 10° F (-12° C) for a reasonable period of time during transit.

3. Live Shellfish or shellstock should be held at temperature between 32° F – 50° F (0° C - 10° C) and maintained alive. (If temperatures are less than 38° F (3° C) live shellfish may die and become unfit for consumption. This is especially true within the first 24 hrs after harvest).

E. Other recommendations for rail car transportation designed to prevent the contamination of food, feed, and related products are outlined in the Voluntary Transportation Guidelines endorsed by AFDO, FMI, GMA and other associations.
VII. ENFORCEMENT

A. General Provisions

1. All vehicles should be examined by regulatory agencies having such responsibilities for deficiencies that would prevent their use as food carriers.

2. Vehicles may be reentered for consideration after sufficient corrections have been made as required by the regulatory authority.

3. Records should be maintained on all rejected vehicles noting the reason(s) for rejection.

4. Carriers engaged in and persons receiving foods in such commercial channels or holding such articles so received shall permit, at reasonable times, access to and permit the copying of all records showing the movement of foods, the quantity, shipper, and consignee.

5. All vehicles should be checked:
   a. Before and after each trip for structural defects,
   b. For cleanliness of the vehicle,
   c. For properly operating refrigeration equipment, and
   d. All food containers within the vehicle should be checked for construction, cleanliness, maintenance, and temperature control.

6. Shippers and consignees should assure themselves that trucking companies and/or cleaning facilities have resources for:
   a. Collecting, maintaining and reproducing relevant documents including but not limited to shipping papers, records of prior hauls on a vehicle-by-vehicle basis, cleaning certificates, inspection reports and exception reports; and
   b. Where appropriate a written procedure regarding the use of the cargo tank access seals including what to do in the event that a seal is broken or shows evidence of tampering.

7. Food facilities should consider:
   a. Using only known, pre-approved and appropriately licensed or permitted (where appropriate) carriers and wash stations;
   b. Establishing agreed upon security measures with shippers;
   c. Taking reasonable steps, such as auditing, to ensure that carriers are in compliance with the company’s food security measures;
   d. Establishing and adhering to regular delivery schedules where feasible;
   e. Exercising strict control including scheduling, egress to the facility, unloading and supervision of unloading or “hazardous” materials; and
f. Establishing a formal review process for evaluating shippers and, where appropriate, wash stations.

B. Trucking Company

1. In the interest of safety and security, shippers should maintain and regularly update records of:

   a. Carrier contacts to include names, phone and fax numbers and email addresses, if applicable;

   b. The carrier’s “U.S. DOT Safety Rating” and compliance with the U.S. DOT insurance regulations both available via the Internet; and

   c. Verification that the carrier has resources, either in-house or contractual, to respond to a product spill.

C. Operator

1. Each operator entering a shipper, wash station, carrier terminal or consignee facility should produce:

   a. His/her Commercial Drivers License, with photo, and

   b. If possible, verify the employment status of an individual operator.

D. Cleaning Facilities

1. Shippers, carriers and consignees should maintain and update:

   a. Facility contacts to include names, phone and fax numbers and email addresses; and

   b. All appropriate certificates if required by Federal, state and local authorities and/or by carriers, shippers and consignees.

E. Receiving Facility for Bulk Tanker Trailers

1. Access points are sealed and match appropriate paperwork;

2. That paperwork is verified including previous washing record, investigate and verify suspicious alterations;

3. Verification of the operator; if the operator has changed, do not unload until his/her credentials are confirmed;

4. If the delivery schedule has been changed the receiver should be notified in advance, if not, confirm the reasons for the change before unloading or loading;

5. Where scales are used, reconciliation before unloading, where appropriate, of differences between the amount of product shipped and that received; and

6. Limited access of drivers to the facility is assured.
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