NOT MEASUREMENT SENSITIVE

> MIL-STD-3006 20 August 2000

SUPERSEDING (See 6.7)

## DEPARTMENT OF DEFENSE STANDARD PRACTICE

## SANITATION REQUIREMENTS FOR FOOD ESTABLISHMENTS



AMSC N/A FSG 89GP <u>DISTRIBUTION STATEMENT A</u>. Approved for public release; distribution is unlimited.

## FOREWORD

- 1. This Military Standard is approved for use by all Departments and Agencies of the Department of Defense (DoD).
- 2. The DoD is committed to the production and storage of food products in clean, sanitary food establishments in order to prevent the transmission of contaminants and foodborne disease to members of the Armed Forces. The requirements contained herein are based on available national food and drug regulatory requirements, and others from professional societies. These requirement documents are selectively applied herein to ensure that food establishments maintain a minimum set of sanitation standards. This minimum set of standards can be augmented by the requiring activity.
- 3. In keeping with the DoD policy to use industry practices, the requirements for food establishments contained in this standard are based on industry standards applicable to the product identified in each appendix. While the appendices identify requirements selected from the appropriate industry standards, they do not contain all of the requirements from these standards. While the requirements cited herein are not all-inclusive, verification during an audit may include other requirements from the cited document at the discretion of the auditor.
- 4. This standard establishes the Current Good Manufacturing Practices (CGMP) requirements, as provided in Code of Federal Regulations (CFR), Title 21, Part 110 as basic sanitation standards for food establishments that supply subsistence. The standard also provides detailed commodity requirements in appendices.
- 5. This standard is applicable to all establishments supplying subsistence. Detailed standards relating to specific types of food establishments are located in the appendices to this standard. The standard is also applicable to military owned/leased facilities where foods are stored (excluding retail operations), utilizing 21 CFR 110, General Provisions only. The auditing of retail establishments is conducted utilizing the Food Code.
- 6. This standard is intended to insure that food establishments supplying subsistence, in both the Continental United States (CONUS) and Outside the Continental United States (OCONUS), are in compliance with CGMPs, thus reducing the risk of transmission of foodborne disease.
- 7. In OCONUS locations the Major Command (MACOM) Commander may supplement this document. This standard is not used to determine an establishment's capabilities to comply with product specifications or other purchase requirements. In cases where CGMPs are provided in the CFR for specific subsistence items (e.g. acidified foods), the specific CGMPs for that item will be applied in addition to those found in Part 110. Good Manufacturing Practice (GMP) documents provided by industry and recognized by the Food and Drug Administration (FDA), the United States Department of Agriculture (USDA) or the United States Department of Commerce (USDC), may be used in conjunction with 21 CFR 110, with MACOM approval.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Director, DoD Veterinary Service Activity, Office of the Surgeon General/HQDA, 5109 Leesburg Pike, Falls Church, VA 22041-3258, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document, or by letter.

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#### 1. SCOPE

1.1 <u>Purpose</u>. This standard establishes sanitation requirements for establishments which produce, process, or store various types of food products before or after final acceptance by an element of the Department of Defense.

#### 2. APPLICABLE DOCUMENTS

2.1 <u>General</u>. See applicable appendices. Each appendix to this standard provides a list of the specific documents cited in the appendix.

#### 3. DEFINITIONS

3.1 <u>Sanitation audit</u>. An in-depth examination of the sanitation system to determine the effectiveness and compliance with predetermined reference standards. The sanitation audit examines and evaluates the sanitation system as it applies to an overall organizational element.

3.2 <u>Critical defect</u>. Condition, practice, step or procedure which: a) presents a biological, chemical or physical property that causes food to be unsafe for consumption; and/or b) the food safety hazard cannot be prevented, eliminated or reduced by a subsequent practice, step or procedure.

3.3 <u>Major defect</u>. Condition, practice, step or procedure which: a) is of less food safety concern yet affects the usability of the products; and/or b) due to loss or lack of control, may become a critical defect.

3.4 <u>Observation</u>. A condition or practice that is not in accordance with the CGMP requirements, but is not a critical or major defect.

3.5 <u>Acceptable</u>. The rating given to an establishment that complies with the requirements of the sanitary audit.

3.6 <u>Unacceptable</u>. The rating given to an establishment that does not comply with the requirements of the sanitary audit.

3.7 <u>Hazard Analysis Critical Control Point (HACCP)</u>. A food safety system that identifies hazards, develops control points throughout the flow of the entire food process, establishes critical limits, and monitors the effectiveness of these control measures.

3.8 <u>Corrective Action Request (CAR)</u>. A written report given to management upon completion of the sanitation audit that identifies critical and major deficiencies, requesting corrective action.

#### 4. GENERAL REQUIREMENTS

4.1 <u>Listing of plants</u>. Compliance with this standard is mandatory for listing of plants in the Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement (see 6.6).

4.2 <u>Appendices</u>. The general requirements in the appendices contained herein shall apply to the appropriate food establishment.

4.3 <u>Sanitation audit</u>. Compliance with the requirements of this standard and the applicable appendices shall be verified by an audit of the food establishment (see 6.4). The audit shall consist of an examination of the methods used to receive, handle, and store food. The sanitation audit shall be performed in the presence of management or a designated representative. Results of the audit shall be documented.

4.4 <u>Laboratory testing</u>. All establishments are subject to laboratory testing. Results of laboratory testing complete the sanitation audit.

4.5 <u>Sanitation Audit Rating</u>. A sanitation audit shall be rated either "Acceptable" or "Unacceptable". A critical defect will result in an Unacceptable rating. Four or more major defects will result in an Unacceptable rating. Each requirement in Appendix A shall only be scored once for each severity, regardless of the number of findings. Observations will not result in an Unacceptable rating. The cumulative effect of multiple observations indicating an out-of-control process may require an upgrade to one major defect, due to the increased public health significance.

4.5.1 <u>Corrective action</u>. Establishments receiving a Sanitation Audit Rating of Unacceptable shall provide written confirmation of corrective actions taken, utilizing a CAR (see 6.5). Critical and major defects shall be addressed in the CAR.

#### 5. DETAILED REQUIREMENTS

The following appendices contain specific requirements related to the cited reference document, but are not intended to be all-inclusive.

APPENDIX A General Requirements
APPENDIX B Bakery
APPENDIX C Manufactured Dairy Products
APPENDIX D Fluid Dairy
APPENDIX E Eggs
APPENDIX F Frozen Desserts
APPENDIX G Ice
APPENDIX H Seafood
APPENDIX J (Reserved)
APPENDIX K Bottled Water/Soft Drinks
APPENDIX L Off Post Caterers and Civilian Restaurants

APPENDIX M Slaughter and Fabrication of Fresh Meat Products in Overseas Areas APPENDIX N Dry Dairy Products APPENDIX P Fresh-Cut Produce

#### 6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but it is not mandatory.)

6.1 <u>Intended use</u>. This standard is intended to ensure that food products procured by DoD for use by Armed Forces personnel are safe and do not pose health risks.

6.2 <u>Issue of DoDISS</u>. When this standard is used in acquisition, the applicable issue of the DoDISS must be cited in the solicitation.

6.3 <u>Tailoring guidance</u>. To ensure proper application of this standard, invitations for bids, requests for proposals, and contractual statements of work should tailor the requirements in section 5 of this standard to exclude any unnecessary requirements. For example, if the requirement applies to a bakery establishment, only the requirements contained in this standard and in the bakery appendix should be mandated.

6.4 <u>Audit guidelines</u>. The government will perform audits of contractors' premises based on guidelines contained in MIL-HDBK-3006. Copies may be obtained by request to Standardization Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094. (http://www.dodssp.daps.mil)

6.5 <u>Corrective actions</u>. Follow the guidelines in MIL-HDBK-3006 for establishments that receive an Unacceptable rating.

6.6 <u>Listing of plants</u>. Plants in compliance with this standard may be listed in the Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement (see web site http://domino1.hcssa.amedd.army.mil/vetcom.nsf/). Requests to be listed in the Directory should be directed to the appropriate procurement agency. Information related to its use should be directed to the appropriate MACOM veterinarian.

6.7 <u>Superseded documents</u>. The following documents are superseded by this standard:

MIL-STD-667 Sanitary Standards for Shell Egg Plants
MIL-STD-668 Sanitary Standards for Food Plants
MIL-STD-671 Sanitary Standards for Milk Evaporating and Drying Plants
MIL-STD-906 Sanitary Standards for Ice Plants
MIL-STD-909 Sanitary Standards for Food Storage Facilities
MIL-STD-1105 Sanitary Standards for Bakeries
MIL-STD-1155 Sanitary Standards for Frozen Desserts Plants
MIL-STD-1156 Sanitary Standards for Soft Drink Plants

MIL-STD-1162 Sanitary Standards for Cheese (and Related Cheese Products) Plants MIL-STD-1481 Sanitary Standards for Meat Processing Plants in Overseas Areas MIL-STD-1482 Sanitary Standards for Butter (and Related Products) Plants

#### 6.8 Subject term (key word) listing.

acceptable
analysis
audit
bakery
cheese
defect
eggs
fresh fruits
ice
observation
plants
sanitary
seafood
standard
unacceptable
vegetables
HACCP (Hazard Analysis Critical Control Point)

#### CONCLUDING MATERIAL

Custodians:

Army - MD2 Navy - SA Air Force - 03

Review activities:

Navy - MS, MC DLA - SS Preparing Activity:

Army - MD2 Project No. 89GP-0003

#### APPENDIX A GENERAL REQUIREMENTS

#### A.1 SCOPE

A.1.1 <u>Scope</u>. This appendix establishes the general sanitation provisions for food production and storage facilities. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

#### A.2 APPLICABLE DOCUMENTS

A.2.1 <u>General</u>. The documents listed in this section are specified in sections 3, 4, and 5 of this appendix. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3, 4, and 5 of this appendix, whether or not they are listed.

A.2.2 <u>Government documents</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

#### CODE OF FEDERAL REGULATIONS (CFR)

Code of Federal Regulations (CFR), Title 21, Part 110.

(Application for copies should be addressed to Superintendent of Public Documents, U. S. Government Printing Office, Washington, DC 20402-0001, http://www.access.gpo.gov/nara/cfr/index.html/.)

#### A.3 DEFINITIONS

The definitions in section 3 of this standard apply to this appendix.

#### A.4 GENERAL REQUIREMENTS

This section is not applicable to this document.

#### A.5 DETAILED REQUIREMENTS

A.5.1 <u>General</u>. The requirements in Tables I through V shall be as specified in the 21 CFR 110, but are not intended to be all-inclusive. The requirements herein relate to personnel safety and cleanliness, building and facilities, equipment and utensils, raw materials and operations, defect action levels, and hazard analysis to ensure the adequacy and safety of food products.

## Table I. Subpart A - Personnel.

ITEM	REQUIREMENT
A.1	Adequate disease control measures shall be practiced. (110.10(a)).
A.2	Employees shall wear suitable clothing. (110.10(b)).
A.3	Employees shall maintain adequate cleanliness. (110.10(b)).
A.4	Employees shall wash hands thoroughly after each absence from the work station and at any other time the hands may have become soiled or contaminated. (110.10(b)).
A.5	Employees working in the processing area shall be free from unsecured jewelry. (110.10(b)).
A.6	Employees shall use proper gloves and maintain them in an intact, clean, and sanitary condition. (110.10(b)).
A.7	Employees shall wear effective hair restraints. (110.10(b)).
A.8	Employees belongings shall be properly stored. (110.10(b)).
A.9	Employees shall not eat food, chew gum, drink beverages or use tobacco where food is exposed or equipment and utensils are washed. (110.10(b)).
A.10	Precautions shall be taken to protect food from being contaminated by employees. (110.10(b)).
A.11	Trained personnel shall be available where needed to provide a level of competency necessary for production of clean and safe food. (110.10(c)).
A.12	Employees shall be supervised, clearly assigned their responsibilities, with competent supervisors. (110.10 (9) (d)).

#### Table II. Subpart B - Buildings and Facilities.

ITEM	REQUIREMENT
B.1	Grounds shall be maintained in a condition that will protect against contamination. (110.20(a)).
B.2	Buildings and structures shall be suitable in size, construction, and design to facilitate maintenance and sanitary operations. (110.20(b)).
B.3	Buildings, fixtures, utensils, and other physical facilities of the plant shall be maintained in a sanitary condition and in good repair. (110.20 (4) & 110.35(a)).
B.4	Adequate lighting, ventilation, and screening shall be provided. (110.20).
B.5	Substances used for cleaning, sanitizing and pest control shall be approved by MACOM, when required, and shall be properly marked and stored. (110.35(b)).

## Table II. <u>Subpart B - Buildings and Facilities</u> - Continued.

B.6	Adequate measures shall be taken to exclude pests from processing areas and to protect against contamination of foods by pests, pesticides, and/or rodenticides. (110.35(c)).
B.7	Food contact surfaces shall be cleaned and sanitized as frequently as necessary and shall be properly stored to protect against contamination of food. (110.35(d)).
B.8	The water supply shall be sufficient and from a sanitary source. (110.37(a)).
B.9	The plumbing shall be adequate in size and shall be adequately installed and maintained. (110.37(b)).
B.10	Sewage and rubbish shall be adequately disposed of. (110.37(c) (f)).
B.11	Adequate toilet facilities shall be provided for employees. (110.37(d)).
B.12	Adequate hand-washing facilities shall be provided at convenient locations. (110.37(e)).

## Table III. Subpart C - Equipment and Utensils.

ITEM	REQUIREMENT
C.1	All pieces of equipment and all utensils shall be adequately cleanable. (110.40(a)).
C.2	Food contact surfaces shall be corrosion resistant and made of nontoxic materials. (110.40(a)).
C.3	Seams on food contact surfaces shall be smoothly bonded or maintained so as to minimize the growth of microorganisms (110.40(b)).
C.4	Surfaces of equipment other than food contact surfaces, maintained in the food handling area, shall be constructed so they can be kept in a clean condition. (110.40(c)).
C.5	Holding, conveying and manufacturing systems shall be designed and constructed so that they can be maintained in an appropriate sanitary condition. (110.40(d)).
C.6	Adequate indicating thermometers, temperature measuring devices, temperature recording devices, and temperature controls in freezer and cold storage facilities shall be in place. (110.40(e)).
C.7	Instruments and controls used for measuring temperature, pH, water activity, or other conditions, shall be accurate and adequate in number. (110.40(f)).
C.8	Compressed air or other gases that are mechanically introduced into food or used to clean food contact surfaces shall be free of indirect food additives. (110.40(g)).
C.9	Equipment lubrication shall not contaminate the product; only food grade lubricants shall be used in the food zone. (110.40(a)).

	Table IV.	Subpart E - Raw Materials and Op	perations.
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ITEM	REQUIREMENT
	Raw materials and other ingredients shall be purchased from an approved
E.1	source, protected from contamination and adulteration (intentional or
	otherwise) at all times. (110.80(a)).
	Manufacturing operations shall be conducted under conditions and controls
E.2	necessary to minimize the potential for growth of microorganisms or
	contamination of foods (intentional or otherwise). (110.80(a)).
	Foods shall be maintained under conditions during warehousing and
E.3	distribution that will protect the food item and its container against physical,
E.3	chemical, and microbial contamination (intentional or otherwise), as well as
	against deterioration. (110.93).
E.4	Chemical, microbial, or extraneous-material testing procedures shall be used
	where necessary to identify sanitation failures or possible food contamination.
	(110.80).
E.5	Methods to exclude physical contaminants shall be established and monitored
	(metal detectors, visual screening, sieves, etc.). (110.80).

#### Table V. Subpart G - Defect Action Levels.

ITEM	REQUIREMENT
G.1	Defect action levels shall be in compliance. (110-110 (a)-(e)).

NOTE: See appendices for specific food production facilities for detailed information concerning defects.

ITEM	REQUIREMENT
H.1	Hazard analysis shall be performed for all stages of production.
H.2	A Hazard Analysis Critical Control Point (HACCP) plan shall be written and
п.2	implemented for each kind of product produced.
	The HACCP plan shall identify food safety hazards, critical control points,
H.3	critical limits, monitoring procedures, corrective action plans, verification
	procedures and record keeping system.
H.4	Corrective action plan shall be followed or deviant product segregated.
H.5	Corrective actions shall be fully documented.
H.6	Records shall include required information.
H.7	Records shall be reviewed, signed and dated as required.
H.8	Records shall be retained as required and shall be available and subject to
	public disclosure limitations.

## Table VI. Subpart H - Hazard Analysis/Record Keeping.

## Table VI. Subpart H - Hazard Analysis/Record Keeping - Continued.

H.9	Reviews shall be performed as required.
H.10	Overall verification shall be performed by a trained individual annually, or as a process change is made, and when the HACCP plan is modified.
H.11	Sanitation control and monitoring shall be performed and documented with sufficient frequency to ensure compliance with Current Good Manufacturing Practices (CGMP) checklists as listed in Part 110.

NOTE: Reference to the controlling 21 CFR 110 sections are identified in parentheses in Tables I through V above.

#### APPENDIX B BAKERY

#### B.1 SCOPE

B.1.1 <u>Scope</u>. This appendix establishes the sanitation requirements for bakery facilities. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

## B.2 APPLICABLE DOCUMENTS

B.2.1 <u>General</u>. The documents listed in this section are specified in sections 3, 4, and 5 of this appendix. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3, 4, and 5 of this appendix, whether or not they are listed.

B.2.2 <u>Non-government publications</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents which are DoD adopted are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

#### BAKING INDUSTRY SANITATION STANDARDS COMMITTEE

Sanitation Standards for the Design and Construction of Bakery Equipment and Machinery, January 1994

(Application for copies should be addressed to the Baking Industry Sanitation Standards Committee, 401 N. Michigan Avenue, Chicago, IL 60611, e-mail: bakesan@aol.com.)

#### **B.3 DEFINITIONS**

The definitions in section 3 of this standard apply to this appendix.

#### B.4 GENERAL REQUIREMENTS

See Appendix A.

#### **B.5 DETAILED REQUIREMENTS**

B.5.1 <u>General</u>. The requirements in Table I shall be as specified in the Baking Industry Sanitation Standards, but are not intended to be all-inclusive.

## Table I. Bakery Requirements.

APPENDIX A PARAGRAPH	REQUIREMENT
C1	Where equipment passes through walls, ceilings or floors, sufficient clearance shall be provided between the equipment and the wall, ceiling or floor, and the opening shall be finished to permit cleaning or the equipment shall be sealed to the adjoining surface. (A6).
C5	Product chutes at floor level shall be so installed that the rim is a minimum of 100mm (4 inches) above floor level. Such chutes shall be provided with overlapping covers. (A13).
C4	Pans used to collect spillage or drip shall be readily accessible or readily removable, and shall be large enough to catch all spillage or drips. Also, fixed pans used to collect liquid spillage or drip shall be readily accessible, and shall have drains and be pitched to ensure complete drainage away from the product zone. (A14).
C5	Liquid ingredient inlet pipes, valves and fittings shall be of sanitary take-apart type, unless designed for in-place cleaning, and shall be pitched for self-draining, back to the point where the line is continuously filled. (A21).
B2	A concrete curb shall be built around all floor-mounted washing equipment to confine leakage. (A27).
C5	Vents on equipment for handling and storing dry ingredients shall be protected against entry of foreign material and shall be provided with readily removable filters to exclude particles of 5 microns or larger. (1-4.1.3).
C5	Screw conveyor housings shall be hinged or removable so that the area around the helical flights can be cleaned from the outside. Sufficient clearance shall be provided between the bottom of the screw housing and the floor to permit sufficient exposure of the screw for cleaning. The screw housing shall be dust-tight and readily accessible. (1-4.1.8).
C5	Straight run surfaces of pneumatic conveyors, valves and rotary feeders shall be smooth and readily accessible or removable except that piping, tubing, valves or feeders which are self-purging shall be exempt from the requirements for accessibility. (1-4.3.1).
C8	Air supply for blowers or compressors shall be filtered to exclude particles of 5 microns or larger. (1-4.3.4).
E2	Dry product handling shall include a sifter. (1-4.4.1).
C8	Separate conveying air systems shall be provided before and after an atmospheric sifter in the system. (1-4.4.2).
C1	A removable flexible connection shall be provided between the inlet to the hopper and the product delivery equipment. (1-4.5.1)
C5	Discharge piping and unloading hoses shall be equipped with caps. (1-4.8.3).

## Table I. Bakery Requirements - Continued.

C5	Bearing shall be outside the product zone and shall be sealed or self-
	lubricated; and design and construction shall be such that lubricant cannot look drip or be forced into the product zone $(2, 4, 2, 6)$
	leak, drip or be forced into the product zone. (2-4.2.6).
C1	Flexible tubing shall be transparent or translucent. Nozzles shall be readily
	removable. (5-4.1.3).
	Pumps, valves, pipe fittings, including those used to insert thermometers and
C1	pressure gauge bulbs, shall be of the sanitary take-apart type and shall be
	readily accessible or removable. (5-4.1.10).
05	Stationary mixer bowls shall drain completely. Close-coupled sanitary drain
C5	valves which are accessible or removable shall be provided. (6-4.2.11).
	The system for lubricating dough-contact surfaces, as distinct from the means
	of mechanical lubrication, shall have a reservoir readily accessible or
C1	removable for cleaning. Distribution lines, valves and pumps shall be
	removable for cleaning, or so designed as to permit Cleaning In Place (CIP).
	(8-4.2.6).
	Proofing cloths shall be smooth, except they may be of absorbent material, but
E2	shall be readily removable for laundering. An extra set of proofing cloths
	shall be provided. (16-4.1.1).
	Pumping, piping, valves and fittings used to dispense or convey frying fats,
05	batter, glaze, icing, jellies and fillings shall be of sanitary take-apart type at
C5	least equal to 3A standards, and shall be accessible for inspection and
	cleaning. (16-4.1.16).
C1	The icing and/or glazing reservoir return shall be readily accessible and self-
	draining. (32-4.1.1).
C5	Drip or catch pans shall be provided under all product transfer points, as well
	as under cleaning attachments, and shall be readily removable. (32-4.1.6).
C1	Drip or catch pans shall be provided between overhead trolleys and product
C4	zone, on suspended monorail type cooler. (33-4.2.5).
F	

NOTE: Reference to the controlling Baking Industry Sanitation Standards are identified in parentheses.

#### APPENDIX C MANUFACTURED DAIRY PRODUCTS

#### C.1 SCOPE

C.1.1 <u>Scope</u>. This appendix establishes the sanitation requirements for manufactured dairy product facilities. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

#### C.2 APPLICABLE DOCUMENTS

C.2.1 <u>General</u>. The documents listed in this section are specified in sections 3, 4, and 5 of this appendix. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3, 4, and 5 of this appendix, whether or not they are listed.

C.2.2 <u>Government documents</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

CODE OF FEDERAL REGULATIONS (CFR)

Code of Federal Regulations (CFR), Title 7, Part 58.

(Application for copies should be addressed to Superintendent of Public Documents, U. S. Government Printing Office, Washington, DC 20402-0001, http://www.access.gpo.gov/nara/cfr/index.html/.)

#### NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

National Institute of Standards and Technology, Handbook 44

(Application for copies should be addressed to National Institute of Standards and Technology, 110 Bureau Drive, Gaithersburg, MD 20899-0001, http://www.nist.gov/.)

C.2.3 <u>Non-Government publications</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents which are DoD adopted are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

## AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI/ASHRAE 52.1-1992 Gravimetric and Dust Spot Procedures for Testing Air Cleaning Devices Used in General Ventilation for Removing Particulate Matter

(Application for copies should be addressed to American National Standards Institute, 11 West 42nd Street, New York, NY 10036, http://www.ansi.org/.)

#### C.3 DEFINITIONS

The definitions in section 3 of this standard apply to this appendix.

#### C.4 GENERAL REQUIREMENTS

See Appendix A.

#### C.5 DETAILED REQUIREMENTS

C.5.1 <u>General</u>. The requirements in Table I shall be as specified in 7 CFR 58, but are not intended to be all-inclusive.

APPENDIX A PARAGRAPH	REQUIREMENT
E2	Graded product shall be marked, labeled, and handled in accordance with Part 58.
B2, B3	Building and facilities shall be maintained for laboratory, starter rooms, grading rooms, etc. (58.126).
C5	All CIP systems, weighing and receiving tanks shall comply with 3-A accepted practices. (58.128).
C7, C8	If applicable, all can washers, associated water and steam lines shall be equipped and maintained for proper temperature and pressure controls. Steam pressure shall not be less than 80 lbs. and the final rinse shall be an automatically controlled system and shall not exceed 140° F (60° C). (58.128 (c)).
С7, Нб	All scales shall comply with the National Institute of Standards and Technology Handbook 44 (latest version) and be accurate to the specifications of 58.128 (m).
E1, E4, H6	Raw milk shall conform to basic quality and classification specifications of 58.132 - 133 and shall be tested at the frequencies required, and records maintained in accordance with 58.134 - 139.
C5	Receiving, holding, and processing of milk and cream and the manufacturing, handling, packaging, storing, and delivery of dairy products shall be in accordance with Part 58.

#### Table I. Manufactured Dairy Product Requirements.

Table I.	Manufactured Dair	y Product Requirements - Continued.

H8	Records shall be maintained for all required tests and analyses. (58.148).
	Sanitary seal assemblies shall be removable on all agitators, pumps, and vats,
C5	and shall be inspected at regular intervals and kept clean. (58.146 (a)).
E4, H6	Packaging room atmosphere shall be practically free from mold and verified. (58.151).
E1	Salt shall be free flowing, white, refined sodium chloride, and meet the
	requirements of Food Chemical Code 58.
E1	Color, if used, must be annatto or other color approved by US FDA. (58.329).
B2, B4, H6	A separate starter room or properly designed starter tanks with satisfactory air movement shall be provided. The air supply shall be filtered to 90% efficiency in accordance with ASHRAE Synthetic Dust Arrestance Test. (58.406).
E4, H6	Mold counts for make rooms shall not be more than 15 colonies per plate/15 minutes. (58.407).
B2	Brine room shall be separately constructed with minimum corrosion. (58.408)
B2	Adequate shelving, air circulation, temperature and humidity control shall be provided and maintained in drying rooms. (58.409) (cheese plants only).
B2	Separate rooms shall be provided for packaging and boxing; maintained at proper temperature to prevent sweating prior to paraffining. (58.410) (cheese plants only).
B2	Separate rooms shall be provided for preparation of bulk cheese to be cut and wrapped into smaller packages. Air movement shall be outward moving. (58.413) (cheese plants only)
C6	Bulk starter vats shall be equipped with tight fitting lids and have adequate temperature controls and indicating/recording devices. (58.414).
C1, C2, C3	Vats, tanks, and drain tables shall be constructed of 16 gauge steel or equally corrosion resistant metal, properly pitched, welded, and fitted with sanitary outlets and valves for maintenance of heat to the lines. Auto curd makers, cyclone separators, conveying systems, and curd fillers shall be properly constructed and maintained. (Part 58).
C1	Mechanical agitators, shields, shafts, hubs, blades, forks, and stirrers shall be in accordance with 3-A Accepted Standards.
C1, C8	Automatic salters shall meet the specific requirements (design, weight and distribution, steam injection, etc.) of Part 58. (cheese plants only).
B4	Hoop and barrel washing equipment shall be vented to the outside. (cheese plants only).
C1, C2, C3	All hand utensils, knives, racks, shovels, scoops, paddles, strainers and other miscellaneous equipment shall meet 3A Sanitary Standards. Wires in curd knives shall be stainless steel, tight, and replaced as necessary. (58.419).
C1	Reuse of single service press cloths shall be prohibited. (58.421) (cheese plants only).
E2	Brine tanks, vacuumizers, and monorail systems shall not contribute to the contamination of the product. (58.422, 423, and 424).

C7, E2	Cheese wax shall be kept clean. Paraffin tanks shall be of adequate size, fitted with wooden racks, and have heat controls and an indicating thermometer. (58.427) (cheese plants only).
E1, H6	Hydrogen peroxide, catalase, cheese cultures, and calcium chloride shall comply with the specifications of 58.431, 432, and 433.
E1	Rennet, pepsin, and other milk clotting/flavor enzymes shall meet the requirements of 58.436.
E4	Each vat and representative sample of finished product shall be analyzed for milk fat, moisture, and weight/volume control.
E2	Based on the variety of products produced, the stated quality, identity, and analytical requirements of Part 58 shall be met.

 Table I. <u>Manufactured Dairy Product Requirements</u> - Continued.

NOTE: Reference to the controlling 7 CFR 58 sections are identified in parentheses.

#### APPENDIX D FLUID DAIRY

#### D.1 SCOPE

D.1.1 <u>Scope</u>. This appendix establishes the sanitation requirements for fluid dairy facilities. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

## D.2 APPLICABLE DOCUMENTS

D.2.1 <u>General</u>. The documents listed in this section are specified in sections 3, 4, and 5 of this appendix. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3, 4, and 5 of this appendix, whether or not they are listed.

D.2.2 <u>Government documents</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

# U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, PUBLIC HEALTH SERVICE

U.S. Public Health Service Publication 229 Grade "A" Pasteurized Milk Ordnance, 1997 Revision

(Application for copies should be addressed to U.S. Department of Health and Human Services, Public Health Service, Food and Drug Administration, Milk Safety Branch, 200 C Street SW, Washington, DC 20204.)

## CODE OF FEDERAL REGULATIONS (CFR)

Code of Federal Regulations (CFR), Title 21, Part 173.

(Application for copies should be addressed to Superintendent of Public Documents, U. S. Government Printing Office, Washington, DC 20402-0001, http://www.access.gpo.gov/nara/cfr/index.html/.)

#### D.3 DEFINITIONS

The definitions in section 3 of this standard apply to this appendix.

#### D.4 GENERAL REQUIREMENTS

See Appendix A.

## D.5 DETAIL REQUIREMENTS

D.5.1 <u>General</u>. The requirements in Table I shall be as specified in U.S. Public Health Service Publication 229 and 21 CFR 173, but are not intended to be all-inclusive.

APPENDIX A PARAGRAPH	REQUIREMENT
E1	Milk shall originate from herds accredited tuberculosis-free, brucellosis-free, and be from countries/regions determined to be acceptable. (Sec. 8).
B7, H6	A system of tagging or recording tanker trucks that have been cleaned and sanitized shall be established and maintained for 15 days. (Sec. 7, Item 12p).
E1	Upon arrival, raw milk and/or raw products for pasteurization shall comply with bacteriological, chemical and temperature standards of Sec. 7, Table 1.
E4	Raw milk and milk products shall be screened for drug residue. (Sec. 6).
E2	Raw milk and milk products shall be held at 45° F (7° C) until processed. (Sec. 7, Item 17p).
C3	Welded portions of food contact surfaces shall be smooth and free from pits, cracks, or inclusions. (Sec. 7, Item 10p).
C2	All milk contact surfaces of multi-use containers and equipment shall be constructed of American Iron and Steel Institute (AISI) 300 series stainless steel or other non-corrosive material as described in the Pasteurized Milk Ordinance (PMO). (Sec. 7, Item 11p).
C5	Equipment shall be designed to protect against surface and overhead contamination. (Sec. 7).
B7	Storage tanks shall be cleaned when emptied and shall be emptied at least every 72 hours. (Sec. 7, Item 12p).
C7	Storage tanks used to store raw milk or heat-treated milk products shall be equipped with a 7 day temperature recording device. (Sec. 7, Item 12p).
C5	Equipment shall comply with the sanitary design and construction standards of the PMO. (Sec. 7).
E2	The overflow of the top rim of the constant level raw milk tank shall be lower than the lowest milk level in the regenerator (see High Heat Short Time (HHST) exception). (Sec. 7, Item 16p(D)).
E2	Raw milk in the regenerator shall drain back to the constant-level tank. (Sec. 7, Item 16p(D)).
E2	The pasteurized side of the regenerator shall be under higher pressure than the raw side. (Sec. 7, Item 16p(D)).

## Table I. Fluid Dairy Plant Requirements.

E2	An atmosphere break shall exist at least 30.48 centimeters above raw milk. (See HHST exception) (Sec. 7, Item 16p(D)).
E2	There shall be no flow promoting device between the regenerator and air- break. (Sec. 7, Item 16p(D)).
E2	There shall be no pump between the raw milk inlet to regenerator and the raw milk supply tank. (See HHST exception) (Sec. 7, Item 16p(D)).
E2	The holding tube slope in the direction of flow shall be at least 2.1 centimeters per meter (0.25 inches per foot). (Sec. 7, Item 16p(B)).
E2	The holding tube shall be designed so that no deviations can be made to the flow rate or holding time. (Sec. 7, Item 16p(B)).
E2	The flow control sensor (Recording Thermometer) shall not be more than 46 centimeters (18 inches) up stream from the control device. (Sec. 7, Item 16p(B)).
E2	The indicating and recorder thermometers shall be properly located. (Sec. 7, Item 16p(B)).
E2	The flow diversion devices shall be properly installed and functioning. (Sec. 7, Items 16p(B)(C)).
E2	The flow promoting devices shall be properly located and of the proper speed, displacement, and capacity. (Sec. 7, Item 16p(F)).
E2	Pasteurized milk shall not be strained or filtered except through a perforated metal strainer. (Sec. 7, Item 15p(A)).
E2	Manual valves shall meet PMO standards (stop/leak grove/close coupled). (Sec. 7, Item 16p(A)).
E2	Pasteurization equipment and controls testing shall be performed in accordance with the PMO. (Appendix I).
H8	Pasteurization recording charts shall be maintained on file at the processing plant. (Sec. 7, Item 16p(E)).
C7	Thermometers shall meet requirements. (Sec. 7, Item 16p(A) & 16p(B), Appendix H).
E2	Air space heating shall be accomplished when required for Batch Pasteurization. (Sec. 7, Item 16p(A)).
E2, H8	Recording charts shall be complete and maintained. (Sec. 7).
C8	Culinary steam shall be in accordance with PMO. (Sec. 7, Item 16p(B).
B8	Boiler water additives shall comply with 21 CFR 173.310.
C8	Air under pressure shall be in accordance with 3-A Accepted Practices. (Appendix H).
E2	There shall be no cross-connection or direct contamination of pasteurized milk or milk product. (USPHS Publication 229).
B6, C5	All openings, including valves, pipes, milk tanker trucks, etc. shall be capped or otherwise protected. (Sec. 7, Item 15p(A)).

## Table I. Fluid Dairy Plant Requirements - Continued.

[	
E5	Filling lines shall be equipped with a device capable of detecting, in each
	container before filling, volatile organic contaminants. The device shall be
	interconnected so that the system will not operate unless the detection device
	is operational. (Sec. 7, Item 12p).
E2, E5	Recirculated cooling water shall be protected from contamination.
	(Appendix G).
E4	Recirculated cooling water shall be tested once per six-month period.
L+	(Appendix G).
	Clean-in-place (CIP) systems shall be in compliance with PMO. CIP systems
	shall have a recording device installed in the return solution line or other
C7	appropriate area to record the temperature and time which the line or
	equipment is exposed to cleaning and sanitizing solution (retained for 3
	months). (Sec. 7, Item 12p).
	Record of CIP cleaning process shall be maintained for recirculated cleaning
H6, H7, H8, H9	systems. (Sec. 7, Item 12p).
	During processing, pipelines and equipment used to conduct milk shall be
C7	effectively separated from cleaning and sanitizing solutions (see the PMO for
	methods). (Sec. 7, Item 15p(B)).
	Plants where containers are manually cleaned shall have a two compartment
B3	sink and a steam cabinet to sanitize containers or a three compartment sink if a
_	chemical sanitizer is used. (Sec. 7, Item 12p).
	Pasteurized milk and/or milk products shall comply with bacteriological,
E4, H8	chemical and temperature standards of Sec. 7. This shall be recorded and
7 -	records maintained. (Sec. 7, and Table 1).
	Pasteurized milk and milk products shall be cooled to $45^{\circ}$ F (7° C) and
E2	maintained at that temperature. (Sec. 7, Item 17p).
	Residual bacteria counts for multi-use and single-service containers shall meet
E4, H8	the standards listed in the PMO. This shall be recorded and records
114,110	maintained. (Sec. 7, Item 12p).
	Packaged milk and milk products which have physically left the premises or
E1	processing plant shall not be repasteurized for Grade A use (see the exception)
LI	(Sec. 7, Item 15p(A)).
B5	Poisonous or toxic materials shall not be stored in any room where milk or
	milk products are received, processed, pasteurized or stored.
	(Sec. 7, Item 15p(A)).
	Only approved rodenticides and insecticides shall be used.
B5	
	(Sec. 7, Item 15p(A)).

NOTE: Cited reference documents for the above are U.S. Public Health Service Publication 229 and 21 CFR 173.

#### APPENDIX E EGGS

#### E.1 SCOPE

E.1.1 <u>Scope</u>. This appendix establishes the sanitation requirements for egg processing facilities. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

#### E.2 APPLICABLE DOCUMENTS

E.2.1 <u>General</u>. The documents listed in this section are specified in sections 3, 4, and 5 of this appendix. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3, 4, and 5 of this appendix, whether or not they are listed.

E.2.2 <u>Government documents</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

CODE OF FEDERAL REGULATIONS (CFR)

Code of Federal Regulations (CFR), Title 7, Part 56.

(Application for copies should be addressed to Superintendent of Public Documents, U. S. Government Printing Office, Washington, DC 20402-0001, http://www.access.gpo.gov/nara/cfr/index.html/.)

#### E.3 DEFINITIONS

The definitions in section 3 of this standard apply to this appendix.

#### E.4 GENERAL REQUIREMENTS

See Appendix A.

#### E.5 DETAILED REQUIREMENTS

E.5.1 <u>General</u>. The requirements in Table I shall be as specified in 7 CFR 56, but are not intended to be all-inclusive.

## Table I. Egg Requirements.

APPENDIX A PARAGRAPH	REQUIREMENT
E3	Grading and packing rooms shall be kept reasonably clean during grading and packaging operations, and shall be thoroughly cleaned at the end of each day. $(56.76, para (a) (2))$ .
B4	The egg grading or candling area shall be adequately darkened to make possible the accurate quality determination of the candled appearance of eggs. There shall be no other light source or reflections of light that interfere with, or prohibit accurate quality determination of eggs in the grading or candling area. Other light sources and equipment or facilities shall be provided to permit the detection and removal of stained or dirty eggs, or other undergrade eggs. (56.76, para (b) (1) & (2)).
E3	The cooler room shall have refrigeration facilities capable of reducing within 24 hours and holding the maximum volume of eggs handled to $45^{\circ}$ F (7° C) or below. Accurate thermometers shall be provided. (56.76, para (c) (1)).
E3	Eggs with excess moisture on the shell shall not be shell protected (oil processed). (56.76, para (d) (1)).
E3	Oil having any off odor, or that is obviously contaminated, shall not be used in shell egg protection. (56.76, para (d) (2)).
E1	Processing oil that has been previously used and which has become contaminated shall be filtered and heated at 180° F (82° C) for 3 minutes prior to use. (56.76, para (d) (3)).
C4, E2	Shell egg processing equipment shall be washed, rinsed and treated with a bactericidal agent each time the oil is removed. It is preferable to filter and heat treat processing oil and clean processing equipment daily when in use. (56.76, para (d) (4)).
E2	The temperature of the wash water shall be maintained at 90° F ( $32^{\circ}$ C) or higher, and shall be at least 20° F (-7° C) warmer than the temperature of the eggs to be washed. These temperatures shall be maintained throughout the cleaning cycle. (56.76, para (e) (2)).
E2	Replacement water shall be added continuously to the wash water of washers to maintain a continuous overflow. Iodine sanitizing rinse may not be used as part of the replacement water. (56.76, para (e) (5)).
E4, H6	An analysis of the iron content of the water supply, stated in parts per million, is also required. When the iron content exceeds 2 parts per million (ppm), equipment shall be provided to correct the excess iron content. If the water source is changed, new tests are required. (56.76, para (e) (6)).
E2, E4, H6	The washing and drying operation shall be continuous and shall be completed as rapidly as possible. Eggs shall not be allowed to stand or soak in water. Immersion washers shall not be used. (56.76, para (e) (8)).

Table I. Egg Requirements - Continued.

E2, E4	Washed eggs shall be spray-rinsed with water having a temperature equal to, or warmer than, the temperature of the wash water and contain an approved sanitizer of not less than 50 ppm nor more than 200 ppm of available chlorine or its equivalent. Alternate procedures, in lieu of a sanitizer rinse, may be approved by the FDA or MACOM. (56.76, para (e) (10)).
E2	During any rest period, eggs shall be removed from the washing and rinsing area of the egg washer and from the scanning area whenever there is a buildup of heat. (56.76, para (e) (12)).

NOTE: Reference to the controlling 7 CFR 56 sections are identified in parentheses.

#### APPENDIX F FROZEN DESSERTS

#### F.1 SCOPE

F.1.1 <u>Scope</u>. This appendix establishes the sanitation requirements for frozen dessert processing facilities. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

#### F.2 APPLICABLE DOCUMENTS

F.2.1 <u>General</u>. The documents listed in this section are specified in sections 3, 4, and 5 of this appendix. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3, 4, and 5 of this appendix, whether or not they are listed.

F.2.2 <u>Government documents</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

# U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, PUBLIC HEALTH SERVICE

Frozen Dessert Processing Guidelines, 1<sup>st</sup> Edition, October 1989, U. S. Department of Health and Human Services, Food and Drug Administration.

(Application for copies should be addressed to U.S. Department of Health and Human Services, Public Health Service, Food and Drug Administration, Milk Safety Branch, 200 C Street SW, Washington, DC 20204.)

#### CODE OF FEDERAL REGULATIONS (CFR)

Code of Federal Regulations (CFR), Title 21, Part 135

(Application for copies should be addressed to Superintendent of Public Documents, U. S. Government Printing Office, Washington, DC 20402-0001, http://www.access.gpo.gov/nara/cfr/index.html/.)

#### F.3 DEFINITIONS

The definitions in section 3 of this standard apply to this appendix.

## F.4 GENERAL REQUIREMENTS

See Appendix A.

## F.5 DETAIL REQUIREMENTS

F.5.1 <u>General</u>. The requirements in Tables I, II, and III shall be as specified in the above references, but are not intended to be all-inclusive.

APPENDIX A PARAGRAPH	REQUIREMENT
E2, H6	Raw milk, low fat milk, skim or cream which was heated above $45^{\circ}$ F (7° C), but below 160° F (71° C) for separation, shall be used in frozen dessert if: 1) It was heated only once for pasteurization, 2) After separation, it was immediately cooled to below $45^{\circ}$ F (7° C), 3) No more than 3 days have elapsed between separation and shipment to the frozen dessert plant, or 4) If it is heated above $125^{\circ}$ F ( $52^{\circ}$ C), it meets 30,000 Standard Plate Count and 10 coliform at plant of shipment, 100 coliform at plant of receipt. (Page 4).
C5	Adequate physical breaks to the atmosphere (at least as large as the piping diameter) shall be provided in order to eliminate cross-connections, and shall be verifiable by walk-through with installation drawings. (Page 9).
E2	All openings into product or onto sanitized product-contact surfaces shall be capped, closed, or adequately protected. (Page 9).
C4	Fill line connections shall be made to tank fittings and tank lids shall not be propped open during filling. (Page 9).
C4	Absorbent items such as rags and sponges shall not be used in the plant environment, and separate brushes shall be used for product and non-product surfaces. (Page 10).
B7	All containers, utensils, and equipment shall be cleaned and sanitized at least once during each day they are used; storage tanks shall be emptied and cleaned at least every 72 hours. (Page 11).
B7	Piping equipment and containers used to process or package aseptically processed frozen dessert mix beyond the final heat-treatment process shall be sterilized before any aseptically processed product is packaged. (Page 11).
E2	Pasteurized mix shall be frozen, dried, packaged, or shipped within 72 hours of being pasteurized. (Page 12).
C1	All openings in covers of tanks, vats, separators, etc. shall be protected by raised edges or other means to prevent the entrance of surface drainage. (Page 13).
C1	There shall be no threads used in contact with milk, milk products, frozen desserts, or frozen dessert mixes except where needed for functional and safety reasons, such as clarifiers, pumps, and separators. (Page 14).

## Table I. Frozen Dessert Requirements, General Considerations.

Table I. Frozen Dessert Requirements, General Considerations - Continued.

B2	The following areas shall be separate from one another: 1) the tank truck receiving area, 2) the processing area, 3) the can or case wash areas, 4) the dry storage areas, 5) the packaging area. (Page 16).
E2	All milk, milk products, frozen dessert mix, liquid eggs, and dairy ingredients shall be maintained at 45° F (7° C) or below. Products in coolers shall be stored at temperatures under 45° F (7° C). (Page 17).

## Table II. Frozen Dessert Requirements, Plant Systems.

APPENDIX A PARAGRAPH	REQUIREMENT
E2	Pressurizing air processing systems which incorporate air directly into the product, such as freezers, air blows, and air agitating systems, shall be designed to reduce potential contamination. They shall be equipped with filters and sanitary check valves. (Page 25).
B8, H6	Where steam is used to provide heat for vat or HHST processes, the water source for the boiler shall be identified as potable and in compliance with CFR, Title 21. (Page 27).
E4, H6	The recirculating cooling water (sweetwater) and recirculating glycol and water mixtures shall be tested at least every six months and shall be free of coliforms and listeria. (Page 28).
B4	Outside air entering the facility shall be filtered and free of condensates. (Page 29).

## Table III. Frozen Dessert Requirements, Specific Plant Operations.

APPENDIX A PARAGRAPH	REQUIREMENT
E2	Dusty, raw ingredient blending operations which create powdery conditions shall be located away from pasteurized product areas. (Page 32).
E2	Products shall be pasteurized in accordance with the time/temperature tables listed in the Frozen Dessert Processing Guide. (Page 33).
E2	Pasteurization shall be in accordance with the methods explained in the Frozen Dessert Processing Guide. (Pages 32 through 67).
E1	Mix shipped in bulk tank trucks to another location shall be repasteurized at that plant prior to freezing and packaging. (Page 68).
E2	All dairy products, eggs, egg products, cocoa products, emulsifiers, stabilizers, liquid sweeteners and dry sugar shall be added prior to pasteurization. (Page 69).

## Table III. Frozen Dessert Requirements, Specific Plant Operations - Continued.

E2	All reconstitution or recombination of dry, powdered, or condensed
	ingredients with water shall be done prior to pasteurization. (Page 69).
	Ingredients which may be added after pasteurization shall be limited to those
	flavoring and coloring ingredients which are: 1) subjected to prior heat
	treatment sufficient to destroy pathogenic microorganisms, 2) of 0.85% water
E2, H6	activity or less, 3) of pH less than 4.7, 4) roasted nuts added at the freezer, 5)
	contain high alcohol content, 6) bacterial cultures, 7) fruits and vegetables
	added at the freezer, and 8) subjected to any process which will assure that the
	ingredient is free of pathogenic microorganisms. (Page 69).
	A plant quality assurance program shall be in place to assure that the fresh
E4	fruit and vegetable products are of high quality and do not contaminate the
	dairy product. (Page 69).
	To prevent contamination, lids of tub and canister-type containers for frozen
C1	desserts shall be designed to overlap the tub or container to be overwrapped.
	(Page 70).
E2	If defoamers are used, they shall not return product or foam to the filler bowl.
	(Page 70).
B7	Transfer pumps, and ripple pumps shall be broken down, inspected, and
D7	cleaned after each use and sanitized prior to startup. (Page 71).
B7	Pails used for rework or adding flavors shall be cleaned after each use and
	sanitized prior to reusing. (Page 71).
C8	The air supply in the freezer shall be properly filtered. (Page 71).
	A bright distinctive food color shall be added to the brine used on novelty
E2	sticks if the brine is calcium carbonate, in order to detect leakage onto the
	finished product. (Page 72).
	When a stainless steel chute is used to convey product (novelty) to the wrapper
B3	after extraction, the chute shall be cleaned at least every four hours during the
	production run. (Page 72).
	Water used to glaze product to help prevent sticking to the paper wrapper shall
E2	be pasteurized or treated to lower the pH. Water dips shall have a continuous
	over-flow to minimize product accumulation throughout the product run. $(D_{1}, -72)$
	(Page 73).
	A physical break shall be required between pasteurized product for
C1	repasteurization when the product is loaded in a raw product receiving area,
	with particular attention being paid to product and CIP connections, so that
	raw product in lines and tanks is never directly connected to any line which
	extends back to the pasteurized product lines or tanks. A physical break is $(D_{1}, C_{2})$
	required. (Page 68).
C1	Adequate drip deflectors shall be provided at each filler valve. (Page 70).

### Table III. Frozen Dessert Requirements, Specific Plant Operations - Continued.

C1	Tanks used for holding cooling media shall be adequately protected and shall be coliform and pathogen free. (Page 70).
E1	For reclaiming operations, only product which has not left the plant premises shall be reclaimed. (Page 74).
C1	Woven wire strainers shall not be used to remove bulky ingredients. (Page 74).
E1	Reworked product, such as ice cream, which is retained in buckets during startup while overrun is stabilized, shall be kept to a minimum. If this product is to be recycled back into product, it shall be properly protected and repasteurized. (Page 75).
E4, H6	Microbiological criteria for end items shall be not more than 50,000 cfu/g Standard Plate Count; not more than 10 coliform/g; and not more than 20 coliform/g for fruits, nuts, or other bulky flavors. (21 CFR 135).
E2	Hardening shall be performed immediately after mix is containerized. Rapid freezing is recommended from 0° F to -15° F (-18° C to -26° C). (21 CFR 135).

NOTE: References to the controlling Frozen Dessert Processing Guidelines or 21 CFR 135 sections are identified in parentheses.

#### APPENDIX G ICE

#### G.1 SCOPE

G.1.1 <u>Scope</u>. This appendix establishes the sanitation requirements for ice production facilities. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

## G.2 APPLICABLE DOCUMENTS

G.2.1 <u>General</u>. The documents listed in this section are specified in sections 3, 4, and 5 of this appendix. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3, 4, and 5 of this appendix, whether or not they are listed.

G.2.2 <u>Government documents</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

# U.S. ENVIRONMENTAL PROTECTION AGENCY DRINKING WATER REGULATIONS

(Application for copies should be addressed to the National Service Center for Environmental Publications, P.O. Box 42419, Cincinnati, OH 45242-2419 (800) 490-9198, http://www.epa.gov/ncepihom/Catalog/EPA811F95002C.html/.)

## U.S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE, PUBLIC HEALTH SERVICE

Sanitary Standard for Manufactured Ice, 1964, Recommendations of the Public Health Service Relating to Manufacture, Processing, Storage, and Transportation

(Application for copies should be addressed to U.S. Department of Health, Education and Welfare, Public Health Service, Food and Drug Administration, Food Service Sanitation Branch, Washington, DC 20204.)

G.2.3 <u>Non-Government publications</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents which are DoD adopted are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

## INTERNATIONAL PACKAGED ICE ASSOCIATION

Sanitary Standard for Packaged Ice

(Application for copies should be addressed to the International Packaged Ice Association, P.O. Box 1199, Tampa, FL 33601.)

#### G.3 DEFINITIONS

The definitions in section 3 of this standard apply to this appendix.

#### G.4 GENERAL REQUIREMENTS

See Appendix A.

#### G.5 DETAIL REQUIREMENTS

G.5.1 <u>General</u>. The requirements in Table I shall be as specified in the International Packaged Ice Association Sanitary Standard for Packaged Ice, but are not intended to be all-inclusive.

#### Table I. Ice Plant Requirements.

APPENDIX A PARAGRAPH	REQUIREMENT
E4, H6	Bacteriological tests of the finished ice shall be conducted monthly, chemical and physical tests annually, and radiological tests every four (4) years, to ensure that ice manufactured for human consumption or for the refrigeration of food products complies with U.S Environmental Protection Agency Drinking Water Regulations. (Sec. 7, para 5).
E4, H6	Random samples of ice produced in the plant shall be tested by an approved laboratory at least monthly for fecal and/or total coliform organisms and Heterotrophic Plate Count (HPC). Total coliform shall not be greater than 2.2 organisms/100 ml. using the Most Probable Number (MPN) method and not greater than 1 organism/100 ml. using the Membrane Filtration (MF) method. The HPC shall not exceed 500 colonies/ml. Records of these tests shall be maintained for two (2) years. (Sec. 7, para 6).
E4, H6	A testing program shall be implemented to obtain background information on the chemical and microbiological of the brine solution as it relates to leaking cans and the subsequent contamination of the product. Such data will reflect the presence of any refrigeration defrosting chemicals, such as ethylene or propylene glycol (if used in the plant), lead (Pb), cadmium (Cd), zinc (Zn), chromium (Cr), and nitrate (NO <sub>2</sub> ). On a quarterly basis, the finished product (varying product types and packages) shall be randomly sampled and analyzed for ethylene or propylene glycol (if applicable) and chlorides (Cl). Reports of analyses shall be maintained for two years. (Sec. 7, para 7 & 8).

## Table I. Ice Plant Requirements - Continued.

E3	Packaged ice products shall be tightly sealed and clearly labeled to show the name, manufacturer, location of processing plant, date code, and net weight.
	(Sec. 8, para 3).
E2	Filtering equipment shall be designed to protect ice from contamination and
	must be subject to periodic treatment and cleaning. (Sec. 6, para 1).
	Freezing tank covers of acceptable materials shall be designed and constructed
	to protect ice containers from splash, drip, and other contamination; shall be
	easily cleanable and kept clean and in good repair. Such covers shall be
E2	equipped with rings or similar devices when hooks are used for pulling. Can
	or tank covers, and the ledges of sides of the tank upon which the cover rests,
	shall be cleaned as often as necessary to keep them in sanitary condition.
	(Sec. 6, para 4).
	Air used for water agitation shall be filtered or otherwise treated to remove dust, dirt, insects, and extraneous material. Filters shall be placed upstream of
C8	the compressor and shall be easily removable for cleaning or replacement.
0	The compressor used to supply air for water agitation shall be designed to
	deliver oil-free air. (Sec. 6, para 8 & 9).
C2	Air lines and core or sucking (vacuum) devices shall be used as needed to
	produce ice free of rust or other foreign materials. (Sec. 6, para 11).
A6	Hands shall not come into direct contact with the ice at any time during
	manufacturing, processing, packaging, and storage. (Sec. 7, para 1).
	All frozen unpackaged ice blocks intended for sale for human consumption or
E3	for refrigeration of food products shall be washed thoroughly with potable
20	water. Ice manufactured for industrial purposes must be handled and stored
	separately from ice intended for human consumption. (Sec. 7, para 2).
B10	Water used for washing or rinsing shall not be reused and shall be disposed of as liquid wasta (Sec. 7, perc. 3)
B7	as liquid waste. (Sec. 7, para 3). All equipment used to store or deliver water, or in contact with ice in the
	freezing process, shall be regularly sanitized. (Sec. 7, para 4).
	neezing process, shar be regularly samuzed. (bee. 7, para 7).

NOTE: Cited reference document for the above is Sanitary Standard for Packaged Ice.

#### APPENDIX H SEAFOOD

## H.1 SCOPE

H.1.1 <u>Scope</u>. This appendix establishes the sanitation requirements for seafood processing facilities. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

## H.2 APPLICABLE DOCUMENTS

H.2.1 <u>General</u>. The documents listed in this section are specified in sections 3, 4, and 5 of this appendix. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3, 4, and 5 of this appendix, whether or not they are listed.

H.2.2 <u>Government documents</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

CODE OF FEDERAL REGULATIONS (CFR)

Code of Federal Regulations (CFR), Title 21, Part 123 and Part 172.

Code of Federal Regulations (CFR), Title 50, Subchapter G, Part 260

(Application for copies should be addressed to Superintendent of Public Documents, U. S. Government Printing Office, Washington, DC 20402-0001, http://www.access.gpo.gov/nara/cfr/index.html/.)

H.2.3 <u>Non-Government publications</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents which are DoD adopted are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

Cured, Salted and Smoked Fish Establishments Good Manufacturing Practices. An Association of Food and Drug Officials Model Code adopted June 1991, revised June 1997

(Application for copies should be addressed to Association of Food and Drug Officials, 2250 Kingston, Suite 311, York, PA 17402, (717) 757-2888, http://www.healthfinder.gov/text/orgs/hr0316.htm/.)

#### H.3 DEFINITIONS

The definitions in section 3 of this standard apply to this appendix.

## H.4 GENERAL REQUIREMENTS

See Appendix A.

## H.5 DETAILED REQUIREMENTS

H.5.1 <u>General</u>. The requirements in Table I shall be as specified in 21 CFR 123 and 172, or in the Cured, Salted and Smoked Fish Establishments Good Manufacturing Practices (FGMP), but are not intended to be all-inclusive.

APPENDIX A PARAGRAPH	REQUIREMENT
B2	Processing rooms shall be separated/segregated to eliminate contamination. (FGMP, Sec. 2.1 (a)).
E2	Equipment and utensils used in the handling of raw or frozen fish portions shall not be used in the handling, transport, or packaging of product after it has entered the smoking chamber or used in the handling of finished product. (FGMP, Sec. 2.2 (b)).
E2	Sanitary zones shall be established around areas in which processed fish is handled/stored. (FGMP, Sec. 2.2 (c)).
E1	Containers used to convey, brine, or store fish shall not be nested (stacked) while they contain fish or otherwise handled during processing or storage in a manner conducive to direct or indirect contamination of their contents. (FGMP, Sec. 3.1 (b)).
C7	Each smoking chamber shall be equipped with a temperature monitoring device so installed as to indicate accurately at all times the internal temperature of the fish within the smoking chamber. (FGMP, Sec. 3.1 (g)).
E2	Equipment and utensils shall be marked in some way to ensure that equipment and utensils used to handle raw fish are not used to handle product that has entered the smoking chamber, or used in the handling of finished product. (FGMP, Sec. 3.1 (I)).
E1	Imported fish or fishery products shall be obtained from approved sources. (21 CFR 123.12).

#### Table I. Seafood Requirements.

## Table I. <u>Seafood Requirements</u> - Continued.

E1	Fresh and frozen fish received shall be inspected and adequately washed before processing. (FGMP, Sec. 4.1 (a)).
E3	Fresh fish, except those immediately processed, shall be iced or otherwise refrigerated to an internal temperature of 38° F (3° C) or below upon receipt and shall be maintained at that temperature until fish are to be processed. (FGMP, Sec. 4.1 (c)).
E3	All fish received in a frozen state shall be thawed promptly and processed, or stored at a temperature which will maintain it in a frozen state. (FGMP, Sec. 4.1 (d)).
E2	After thawing, fish shall be washed thoroughly with a vigorous potable water spray or a continuous water flow system. When thawing and brining occur concurrently, the fish shall be washed in this same fashion following the thawing and brining. (FGMP, Sec. 4.1 (f)).
E2	All fish shall be free of viscera prior to processing (see reference document for exceptions). (FGMP, Sec. 4.1 (g)).
E2	The evisceration of fish shall be conducted in a segregated or separate processing room. The evisceration shall be performed with minimal disturbance of the intestinal tract contents, and the fish, including the body cavity, shall be washed thoroughly with a vigorous spray or a continuous water flow system following evisceration. (FGMP, Sec. 4.1 (h)).
E4, H6	All processed fish shall be produced pursuant to the process as established by a competent processing authority. (FGMP, Sec. 4.2 (b)).
E3	All processed fish shall be distributed and sold in a manner that ensures that the internal temperature is maintained at 38° F (3° C) or below (see reference for exceptions). (FGMP, Sec. 4.2 (d)).
E2	The vacuum packaging or modified atmosphere packaging of processed fish shall be conducted only within the facilities of the manufacturer. (FGMP, Sec. 4.2 (e)).
E4	Processed fish to be vacuum packaged or modified atmosphere packaged shall be chemically analyzed for water phase, salt, and for nitrate and other additives when used, with sufficient frequency to ensure conformance with finished product specification requirements. (FGMP, Sec. 4.2 (f)).
A10	The finished product shall be handled only with clean, sanitized hands, gloves or utensils. Manual manipulation of the product shall be kept to a minimum. (FGMP, Sec. 4.4 (a)).

## Table I. <u>Seafood Requirements</u> - Continued.

E3	Shipping containers, retail packages and shipping records relating to processed fish shall be appropriately labeled in accordance with the perishable nature of the product. (FGMP, Sec. 4.4 (c)).
E3	Each container of processed fish shall be legibly marked or labeled with an identifying code and required identification. (FGMP, Sec. 4.4 (d)).
E2, H6	Brining operations shall be performed IAW the appropriate time and temperature parameters. (FGMP, Sec. 5.1 (a)).
E2	For dry salting, the fish shall be returned to a refrigerated area of 38° F (3° C) or lower immediately after the application of the salt. (FGMP, Sec. 5.1 (b)).
E2	Different species of fish shall not be mixed in the same brine tank. (FGMP, Sec. 5.1 (c)).
E2, E4, H6	Brines shall not be reused without an adequate process available to return the brine to an acceptable microbiological level. (FGMP, Sec. 5.1 (d)).
E2	Fish shall be rinsed with fresh potable water after brining, except for fish which have been injected with brine. (FGMP, Sec. 5.1 (e)).
E2	Drying of a product to be cold smoked shall be carried out in a refrigerated area of 38° F (3° C) or below. (FGMP, Sec. 5.1 (f)).
E3, H6	The use of sodium nitrite shall be permitted with those species of fish allowed by regulation. (FGMP, Sec. 5.1 (g)) (21 CFR 172.175 and 172.177).
E3	Fish shall be of relatively uniform size and weight and arranged without overcrowding or touching each other within the smokehouse oven. (FGMP, Sec. 5.2 (a)).
E2	Liquid smoke, generated smoke, or a combination of liquid smoke and generated smoke shall be applied to all surfaces of the product at the appropriate times. (FGMP, Sec. 5.2 (b)).
C6	Hot processed smoked fish shall be produced by a controlled process that utilizes a temperature monitoring system to assure that all products reach the required temperature. (FGMP, Sec. 5.3 (a)).
E2, H6	For hot processed smoked fish to be air packaged, a controlled process shall be used to heat the fish. (FGMP, Sec. 5.3 (b)).
E2, H6	For hot processed smoked fish to be vacuum or modified atmosphere packaged, a controlled process shall be used to heat the fish. (FGMP, Sec. 5.3 (c)).
C6, H6	Cold processed smoked fish shall be produced by a controlled process that utilizes a temperature monitoring system assuring all products do not exceed process temperatures in accordance with authorized methods. (FGMP, Sec. 5.4 (a)).
E2, E4, H6	For cold processed smoked fish to be air packaged, fish that have brine shall contain not less than 2.5 percent water phase salt in the loin muscle of the finished product. (FGMP, Sec. 5.4 (b)).

Table I. Seafood Requirements - Continued.

E2, E4, H6	For cold processed smoked fish to be vacuum or modified atmosphere packaged, fish that have been brined shall contain not less than 3.5 percent water phase salt in the loin muscle of the finished product, or a combination of 3.0 percent water phase salt in the loin muscle of the finished product and not less than 100 nor more than 200 parts per million of sodium nitrite. (FGMP, Sec. 5.4 (c)).
E3	The finished products shall be properly cooled to $70^{\circ}$ F ( $21^{\circ}$ C) within 2 hours and further cooled to $38^{\circ}$ F ( $3^{\circ}$ C) within an additional 4 hours. Finished products shall be then maintained at $38^{\circ}$ F ( $3^{\circ}$ C). (FGMP, Sec. 5.5).
H8	Records of every transaction involving the sale and distribution of processed fish shall be kept. (FGMP, Sec. 4.3 (a)).
H6	Fish processing records shall be legibly written in English and shall identify the processing procedures, the product processed, process time, temperature, and the results of the chemical examination, together with the identifying lot code, the number of containers per coding interval, the size of the containers coded, and the year, day, and period when each lot was packed. (FGMP, Sec. 4.3 (b)).
H8	Records shall be maintained for the chemical examination of the finished product for the purpose of validating the water phased salt and sodium nitrite requirements. (FGMP, Sec. 4.3 (c)).
H8	All records relative to the scheduled process used to produce processed fish or smoked fish shall be readily available to government inspection personnel. (FGMP, Sec. 4.3 (d)).
H8	Records of refrigerated and/or frozen products, the general adequacy of equipment, process used, or results of scientific studies and evaluations, shall be retained for the amount of time, as specified. (21 CFR 123.9).

NOTE: Reference to the controlling sections of the FGMP and of 21 CFR 123 and 172 are identified in parentheses.

## APPENDIX K BOTTLED WATER/SOFT DRINK

## K.1 SCOPE

K.1.1 <u>Scope</u>. This appendix establishes the sanitation requirements for bottled water/soft drink processing facilities. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

## K.2 APPLICABLE DOCUMENTS

K.2.1 <u>General</u>. The documents listed in this section are specified in sections 3, 4, and 5 of this appendix. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3, 4, and 5 of this appendix, whether or not they are listed.

K.2.2 <u>Government documents</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

CODE OF FEDERAL REGULATIONS (CFR)

Code of Federal Regulations (CFR), Title 21, Part 129 and 165

Code of Federal Regulations (CFR), Title 40, Part 141, Subparts C, E, and F

(Application for copies should be addressed to Superintendent of Public Documents, U. S. Government Printing Office, Washington, DC 20402-0001, http://www.access.gpo.gov/nara/cfr/index.html/.)

## **K.3 DEFINITIONS**

The definitions in section 3 of this standard apply to this appendix.

## K.4 GENERAL REQUIREMENTS

See Appendix A.

#### K.5 DETAILED REQUIREMENTS

K.5.1 <u>General</u>. The requirements in Table I shall be as specified in 21 CFR 129 and 165, but are not intended to be all-inclusive.

## Table I. Bottled Water/Soft Drink Requirements.

APPENDIX A PARAGRAPH	REQUIREMENT
B2	The bottling room shall be separated from the other plant operations or storage areas by tight walls, ceilings, self-closing doors, and size of conveyor opening. (129.20 (a)).
B4	Adequate ventilation shall be provided to minimize odors, noxious fumes, or vapors; and condensate in processing, bottling, container washing and sanitizing rooms. Ventilation equipment shall be clean. (129.20 (c)).
E2	Product in process in other than sealed piping systems under pressure shall be protected from back-siphonage and other sources of contamination. (129.20 (b)).
B2	Bottle washing and sanitizing shall be in an enclosed room and shall be positioned so as to minimize post-sanitization contamination. (129.20 (d)).
B2	Processing, washing, and storage rooms shall not be directly connected to room(s) used for domestic household purposes. (129.20(e)).
E1, H6	Product water supply shall be from an approved, properly located, protected, operated, and accessible source. The water shall be of safe, sanitary quality, and conform at all times to applicable laws and regulations. Operations water shall meet the same requirements. (129.35 (a)).
E4, H6	Source waters shall be analyzed annually for chemical and physical parameters; and once every four years for radiological parameters. Source waters, other than municipal sources, shall be analyzed weekly for microbiological quality. (129.35 (a)).
B7	Product water contact surfaces (utensils, pipes, equipment, etc.) shall be clean and adequately sanitized daily. (129.37 (a)).
B7	Product water contact surfaces (utensils, pipes, equipment, etc.) shall be maintained free of scale, oxidation, and other residue. The presence of any unsanitary condition shall be corrected immediately. (129.37 (a)).
E3	Containers, caps, or seals shall be purchased and stored in sanitary closures (original containers) in a clean, dry place. They shall be examined before use and shall be handled, dispensed and used in a sanitary manner. They shall be washed, rinsed, and sanitized as needed. (129.37 (c)).
E2	Filling, capping, closing, sealing, and packaging shall be done in a sanitary manner. (129.37 (d)).
E3	Storage tanks shall be closed to exclude all foreign matter. Filtered vents shall be provided. Filters shall be readily cleanable or have replaceable elements. (129.40 (a)).
H6, H8	Treatment methods shall accomplish their intended purpose. Records shall be maintained to show type and date of treatments and physical inspections of equipment. Conditions found, performance and effectiveness shall be noted. (129.80 (a)).

## Table I. Bottled Water/Soft Drink Requirements - Continued.

E2	Treatment equipment processes and substances used shall preclude
	contamination or adulteration of the product. (129.80 (a)).
E4, H6	Product water samples shall be taken after processing, prior to bottling, to
	assure uniformity and effectiveness of the treatment process. Methods of
	analysis shall be approved by the government agency having jurisdiction.
	(129.80 (a)).
	All unsanitary or defective containers shall be reprocessed or rendered
E2	unusable and discarded. Multi-service primary containers shall be cleaned,
E2	sanitized, and inspected immediately prior to being filled, capped, and sealed.
	(129.80 (b)).
	Mechanical washers shall be inspected. Records of physical maintenance,
H6	inspections, conditions found, and performance of the mechanical washer,
	shall be maintained by the plant. (129.80 (b)).
F.2	Multi-service shipping cases shall be maintained to assure that they will not
E3	contaminate primary containers or the product. (129.80 (b)).
	For sanitizing operations: Records shall be maintained concerning the
H11	concentration of sanitizing agents and the amount of time the agents were in
	contact with surfaces being sanitized. (129.80 (c) and (d)).
	Each unit package shall be identified by a production code. The code shall
E2	identify the particular batch or segment of a continuous run, and the
	production date. (129.80 (e)).
	Records shall be maintained of product type, volume produced, date produced,
H6, H8	lot code used, and distribution to wholesale and retail outlets. (129.80 (e)).
<b>F</b> 1	Containers and closures shall be nontoxic and shall comply with FDA
E1	standards. (129.80 (f)).
E2	Filling, capping, and sealing shall be monitored. Filled containers shall be
E2	visually or electronically inspected. (129.80 (f)).
	A swab and/or rinse bacterial count shall be performed quarterly on four
E4, H6	containers and closures immediately prior to filling the containers.
	(129.80 (f)).
	Representative bacteriological samples shall be taken once per week of each
E4, H6	type of product water produced during a day's production.
21,110	(129.80 (g) and 165.110).
E4, H6	Representative chemical, physical, and radiological samples shall be analyzed
	once a year for each product water. (129.80 (g) and 165.110).
E4, H6	Records shall be maintained of sampling date, type of product, production
	code, and results of each analysis. (129.80 (h)).
	All records shall be retained for two years. Current certificates or notifications
H8	of approval authority for source and supply of product and operations water
	shall be on file. (129.80 (h)).
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NOTE: References to the controlling 21 CFR 129 and 165 sections are identified in parentheses.

## APPENDIX L OFF POST CATERERS AND CIVILIAN RESTAURANTS

## L.1 SCOPE

L.1.1 <u>Scope</u>. This appendix establishes the sanitation requirements for off post caterers and civilian restaurant facilities. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

## L.2 APPLICABLE DOCUMENTS

L.2.1 <u>General</u>. The documents listed in this section are specified in sections 3, 4, and 5 of this appendix. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3, 4, and 5 of this appendix, whether or not they are listed.

L.2.2 <u>Government documents</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

# U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, PUBLIC HEALTH SERVICE

Food Code 1999

(Application for copies should be addressed to U.S. Department of Health and Human Services, Food and Drug Administration, Food Service Sanitation Branch, Washington, DC 20204. Document No. PB99-115925 available printed, on CD ROM, or on diskette from National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161; 1-800-553-6847); or download from web site: http://vm.cfsan.fda.gov/~dms/foodcode.html/.)

## L.3 DEFINITIONS

The definitions in section 3 of this standard apply to this appendix.

## L.4 GENERAL REQUIREMENTS

See Appendix A.

## L.5 DETAIL REQUIREMENTS

L.5.1 <u>General</u>. The requirements in Table I shall be as specified in the Food Code, but are not intended to be all-inclusive.

APPENDIX A PARAGRAPH	REQUIREMENT
E1	Food prepared in a private home shall not be used or offered for human consumption in a food establishment. (3-201.11).
E1, E2	If game animals are used they shall have been commercially raised for food, be processed under a regulatory inspection program, and in accordance with applicable meat and poultry laws. (3-201.17).
E2	A food employee shall not use a utensil more than once to taste food that is to be sold or served. (3-301.12).
A10	Food shall be protected from cross contamination by separation, packaging, cleaning, or other means. (3-302.11).
E3	Food items shall be stored in their original containers or be identified with their common name on working containers. (3-302.12).
E1	Pasteurized eggs or egg products shall be substituted for raw shell eggs in applicable foods, with exceptions as noted in the reference. (3-302.13).
E1	Prepared foods shall not contain unapproved additives. (3-302.14).
E2	Raw fruits and vegetables shall be thoroughly washed/disinfected prior to processing, with exceptions as noted in the reference. (3-302.15).
E1	Ice used as an external cooler shall not be used as food. (3-303.11).
E2	During pauses in food preparation or dispensing, food preparation and dispensing utensils shall be stored in a manner to inhibit/reduce contamination. (3-304.12).
A6	If used, single-use gloves shall be used for only one task. Slash-resistant gloves and cloth gloves shall be used in an appropriate manner. (3-304.15).
E3	During preparation, unpackaged food shall be protected from environmental sources of contamination. (3-305.14).
E2	Raw animal foods shall comply with cooking requirements listed in the Food code. (3-401.11/12).
E2	Fruits and vegetables that are cooked for hot holding shall be cooked to a temperature of $140^{\circ}$ F (60° C). (3-401.13).
E2	Raw, raw-marinated, partially cooked, or marinated-partially cooked fish other than molluscan shellfish shall be frozen throughout to a temperature of either - $4^{\circ}$ F (-20° C) or below for 168 hours (7 days) in a freezer, or -31° F (-35° C) or below for 15 hours in a blast freezer, with exceptions as noted in the reference. Records shall be created and retained as specified, with exceptions as noted in the reference. (3-402.11/12).

 Table I. Off Post Caterers and Civilian Restaurant Facility Requirements.

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E2	Potentially Hazardous Food (PHF) that is cooked, cooled, and reheated for hot holding shall be reheated so that all parts of the food reach a temperature of at least 165° F (74° C) for 15 seconds, with exceptions as noted in the reference. (3-403.11).
	Reheating for hot holding shall be done to ensure the food is between 41° F
E2	$(5^{\circ} \text{ C}) \text{ or } 140^{\circ} \text{ F} (60^{\circ} \text{ C}) \text{ and } 165^{\circ} \text{ F} (74^{\circ} \text{ C}) \text{ for not more than 2 hours.}$ (3-404.11).
50	Frozen PHF shall be slacked under refrigeration below 41° F (5° C) with
E2	exceptions as noted in the reference. (3-501.12).
	Frozen PHF shall be thawed under proper refrigeration; proper running water
E2	technique; proper cooking techniques; and for proper time periods.
	(3-305.13).
	Cooked PHF shall be cooled utilizing proper time temperature requirements,
E2	and proper cooling methods, with exceptions as noted in the reference.
	(3-501.14/15).
Γ0	PHF shall be maintained in accordance with proper hot and cold holding
E2	procedures. (3-501.16).
	Ready-to-Eat PHF prepared and held refrigerated for more than 24 hours shall
E3	be clearly marked at the time of preparation with appropriate date marking,
	with exceptions as noted in the reference. (3-501.17).
E2	A food establishment shall obtain a variance from the regulatory authority
	when specialized processing methods are employed. (3-502.11).
C7	Food temperature measuring devices with glass stems or sensors shall be
	encased in shatterproof coatings. (4-201.12).
C6	Temperature measuring devices shall be properly designed, located and easily
C7	readable. (4-203.12).
C7	Warewashing machines shall be equipped with proper temperature and
	pressure indicating devices. (4-203.13 & 4-204.115).

NOTE: Cited reference document for the above is the Food Code.

#### APPENDIX M SLAUGHTER AND FABRICATION OF FRESH MEAT PRODUCTS IN OVERSEAS AREAS

## M.1 SCOPE

M.1.1 <u>Scope</u>. This appendix establishes the sanitation requirements for slaughter and fabrication of fresh meat products in overseas areas. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

## M.2 APPLICABLE DOCUMENTS

M.2.1 <u>General</u>. The documents listed in this section are specified in sections 3, 4, and 5 of this appendix. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3, 4, and 5 of this appendix, whether or not they are listed.

M.2.2 <u>Government documents</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

CODE OF FEDERAL REGULATIONS (CFR)

Code of Federal Regulations (CFR), Title 9, Parts 53, 54, 71, 72, 75, 110, 307, 308, 309, 310, and 313; and CFR Title 21, Part 110.

(Application for copies should be addressed to Superintendent of Public Documents, U. S. Government Printing Office, Washington, DC 20402-0001, http://www.access.gpo.gov/nara/cfr/index.html/.)

#### M.3 DEFINITIONS

The definitions in section 3 of this standard apply to this appendix.

## M.4 GENERAL REQUIREMENTS

See Appendix A.

## M.5 DETAIL REQUIREMENTS

M.5.1 <u>General</u>. The requirements in Tables I, II, and III shall be as specified in 9 CFR 53, 54, 71, 72, 75, 110, 307, 308, 309, 310, and 313; and 21 CFR 110, but are not intended to be all-inclusive.

Table I. Ante-Mortem Requirements (Unloading Ramps to Stunning Area
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APPENDIX A PARAGRAPH	REQUIREMENT
A1, E1	Livestock shall be available (originate) from an approved region. Food production animals shall be free of communicable disease. Animals from a quarantine region shall be processed in that region. (9 CFR 71/72/75/53/54).
E1	Handling of livestock from the unloading ramps to the stunning area shall be done in a humane manner. (9 CFR 313).
B2	Pens, chutes and alleys shall be paved, drained and supplied with adequate hose connections for cleanup purposes. (9 CFR 307.2).
E2	Livestock entering the facility shall receive an adequate ante-mortem inspection on the day of and before slaughter and shall be properly segregated when required. (9 CFR 309.1/2).
B2	Satisfactory pens, equipment, lighting, and assistants shall be available for conducting ante-mortem inspection and for separating, marking and holding apart passed livestock from livestock which has been identified as suspect or condemned. (9 CFR 307.2).
B2	When holding pens of an establishment are located in a public stockyard, such pens shall be regarded as part of the premises of that establishment. (9 CFR 309.1).
B2	Holding and shackling pens shall be located outside of or effectively separated from the slaughtering department. (9 CFR 307).
E1	Animals shall have access to water in all holding pens and if held longer than 24 hours, feed shall be provided. (9 CFR 313.2).
E1	Seriously crippled animals, "downers", shall be identified as suspects and properly disposed of. (9 CFR 309.2).
E1	Livestock found to be dead or in a dying condition on the premises of an establishment shall be identified as condemned and disposed of. (9 CFR 309.3).
E1	Any swine having a temperature of $106^{\circ}$ F ( $41^{\circ}$ C) or higher and any cattle, sheep, goats, horses, mules, or other equines having a temperature of $105^{\circ}$ F ( $40^{\circ}$ C) or higher shall be identified as condemned. (9 CFR 309.3)
B2	Floors of livestock pens, ramps, and driveways shall be constructed and maintained as to provide good footing for livestock. (9 CFR 313.1)
E1	Humane methods of slaughter shall be applied within an appropriate stunning area. (9 CFR 313).
E1	Animals shall be adequately stunned prior to being shackled, hoisted, thrown, cast, or cut (bleeding). (9 CFR 313.2).

## Table II. Post-Mortem Requirements.

APPENDIX A PARAGRAPH	REQUIREMENT
E2	A careful post-mortem examination and inspection shall be made of carcasses and parts of all livestock slaughtered. (9 CFR 310.1)
E2	The head, tail, tongue, thymus gland, and all viscera of each slaughtered animal shall be handled in such a manner as to identify them with the rest of the carcass and as being derived from the particular animal involved, until the post-mortem examination of the carcass and parts thereof has been completed. (9 CFR 310.2).
E2	Identification devices (ie., ear tags) shall be removed from the animal's hide or ear by an establishment's employee and shall be placed in a clear plastic bag and affixed to the corresponding carcass. (9 CFR 310.2).
E2	Each carcass, including all detached organs and other parts, in which any lesion or condition is found that might render the meat or any part unfit for food purposes, or otherwise adulterated, and which, for that reason would require a subsequent inspection, shall be retained. All parts shall be retained until an approved authorized veterinary final inspection has been completed. Retained carcasses shall not be washed or trimmed unless authorized by veterinary official. (9 CFR 310.3).
E2	Each carcass or part which is found on final inspection to be unsound, unhealthful, unwholesome, or otherwise adulterated shall be conspicuously marked. (9 CFR 310.5).
E2	Spermatic cords and pizzles shall be removed from all carcasses. Preputial diverticuli shall be removed from hog carcasses. (9 CFR 310.7)
E2	When a carcass is to be dressed with the skin left on, the skin shall be thoroughly washed and cleaned before any incision is made for the purpose of removing any part thereof or evisceration. (9 CFR 310.10)
E2	All hair, scurf, dirt, hoofs and claws shall be removed from hog carcasses, and the carcasses shall be thoroughly washed and cleaned before any incision is made for inspection or evisceration. (9 CFR 310.11)
E2	The sternum of each carcass shall be split and abdominal and thoracic viscera shall be removed at the time of slaughter in order to allow proper inspection. (9 CFR 310.12)
E2	Carcasses found before evisceration to be affected with anthrax shall not be eviscerated but shall be retained, condemned, and immediately tanked and the complete working area shall be cleaned immediately and disinfected. (9 CFR 310.9).
E2	The kidney capsule shall be opened to expose the kidneys for the purpose of inspection. (9 CFR 310.19).
E2	If the hide is penetrated by electrodes during electrical stimulation, the penetrated tissue shall be trimmed. Disinfection of electrodes between each hide-on carcass stimulation is not required. (9 CFR 308.16).
E2	Partially skinned carcasses shall not be stimulated. (9 CFR 308.16).

Table II.	Post-Mortem Requirements - Continued.

B7	For hide-off stimulation, the carcass contact surfaces of equipment shall be disinfected between carcasses. (9 CFR 308.16).
E2	<ul> <li>Carcass contamination of edible tissue by stomach contents, feces and/or urine shall be unacceptable. To prevent this contamination, any of the following shall be used prior to electrical stimulation: (9 CFR 308.16).</li> <li>a. Leave the sphincter muscles intact.</li> <li>b. Cut the rectum (scalp the bung) and the urethra free from surrounding tissue and securely tie each off.</li> <li>c. Partially open the mid-line and/or slay the brisket to reduce pressure on the visceral organs.</li> <li>d. Any other pressure-relieving or discharge-restricting alternative acceptable to the chief veterinary inspector.</li> <li>e. Rod (separate the esophagus from the surrounding tissue) and tie it off.</li> </ul>
E2	<ul> <li>Kod (separate the esophagus from the surrounding itssue) and de it off.</li> <li>When only a portion of a carcass is to be condemned on account of slight bruises, either the bruised portion shall be removed immediately and disposed of, or the carcass shall be promptly placed in a retaining room and kept until chilled, and the bruised portion shall then be removed and disposed of. (9 CFR 308.16).</li> </ul>
C1	Tables, benches, and other equipment on which post-mortem inspection is to be performed, shall be of such design, material, and construction as to enable inspectors to conduct their inspection in a ready, efficient and clean manner. (9 CFR 307.2).
E2	<ul> <li>Cases, carcasses, organs, and other parts shall be handled in a sanitary manner to prevent contamination (adulteration) with fecal material, urine, bile, hair, dirt, or foreign matter; however, if contamination occurs, it shall be promptly removed in a manner satisfactory to the inspector. (9 CFR 310.18).</li> <li>Specific preventive measures include: <ul> <li>a. Knives shall immediately be disinfected after contamination (i.e, after sticking, head removal, following the initial cut through the hide/skin, after removal of an abscess, bruise or contamination).</li> <li>b. No water shall be placed onto a carcass until the entire hide has been removed and the carcass inspection has been performed.</li> <li>c. Manual hide removal shall begin at the hind leg and proceed downward allowing the hide to be laid back away from the flesh.</li> <li>d. The final wash shall begin at the highest point of the carcass and work downwards.</li> <li>e. No portion of the forequarters shall come in contact with eviscerating/inspection tables.</li> <li>f. Overhead rails shall be free of flaking rust or grease.</li> <li>g. Carcasses shall not come in contact with walls, pillars, dividers or other features that will result in cross-contamination.</li> </ul> </li> </ul>

## Table II. Post-Mortem Requirements - Continued.

i	i. Pressurized water used to wash down equipment and facilities shall only
	be used when carcasses are not in the location (to avoid splash
	contamination).
j	j. Ventilation shall be provided at the location of a mechanical hide puller.
	k. Condensation shall not drip onto carcasses.
	I. Carcasses shall be washed immediately after the final inspection and prior
	to being placed into a cooler.
1	m. The floor area (dry landing) within the stunning box shall be maintained in
	a reasonably dry condition.

APPENDIX A PARAGRAPH	REQUIREMENT
B8	Nonpotable water shall be permitted only in those parts of the establishment where no edible product is handled or prepared and then only for limited purposes such as on ammonia condensers not connected with potable water supply. (9 CFR 308.3).
B8	Nonpotable water shall not be permitted for washing floors, areas, or equipment involved in trucking materials to and from edible product departments nor shall it be permitted in hog scalding vats, dehairing machines, or vapor lines serving edible product rendering equipment, or for cleanup of shackling pens, bleeding areas, or runways within the slaughtering department. (9 CFR 308.3).
B9	In all cases, nonpotable water lines shall be clearly identified. (9 CFR 308.3).
B8	If hot water is used for cleaning, it shall not be at a temperature less than 180° F (82° C). (9 CFR 308.3).
B2	Rails shall be located so as to prevent product from coming in contact with posts, walls, and other fixed parts of the building, barrels, boxes, etc. (9 CFR 308.3).
A4	Butchers and others who dress or handle diseased carcasses or parts shall, before handling or dressing other parts, cleanse their hands with liquid soap and hot water, and rinse them in clear water. (9 CFR 308.8).
B7	Implements used in dressing diseased carcasses shall be thoroughly cleansed with hot water having a minimum temperature of 180° F (82° C) or approved disinfectant. (9 CFR 308.8).
В3	The rooms and compartments in which any product is prepared or handled shall be free from dust and from odors from dressing and toilet rooms, catch basins, hide cellars, casing rooms, inedible tank and fertilizer rooms, and livestock pens. (9 CFR 308.3).

## Table III. <u>Slaughter and Fabrication Requirements</u>.

	Such practices as spitting on whetstones; spitting on the floor; placing	
A10	skewers, tags, or knives in the mouth; inflating lungs or casings with air from	
	the mouth shall be prohibited. (9 CFR 308.8).	
	Disinfecting units shall be maintained above 180° F (82° C) and shall be	
C7, B5	adequately located. Chemical disinfectants may be used during production	
	when approved by the MACOM Veterinarian. (9 CFR 308.3).	
C1	Cutting boards and tables shall be solid, clean and sanitary. (9 CFR 308.7).	
	Employees showing evidence of a communicable disease or affected with	
A1	boils, sores, or infected wounds shall not handle or prepare any product.	
	(9 CFR 308.14).	
A2	Aprons, frocks, and other outer clothing worn by persons who handle product	
	shall be clean and changed each day. (9 CFR 308.8).	
C1	Scabbards shall be constructed of a smooth impervious material.	
C1	(9 CFR 309.1).	
E-2	Fabrication rooms shall be maintained at 50° F (10° C).	
	Fresh meat shall not exceed 45° F (7° C) during storage or fabrication. If hot	
F2	boning is in place, the production shall take place in a room that is maintained	
E2	at 50° F (10° C) and the finished product shall immediately be chilled.	
	(21 CFR 110.80).	

 Staughter and Fabrication Requirements
 - Continued.

NOTE: Cited reference documents for the above are 9 CFR 53, 54, 71, 72, 75, 110, 307, 308, 309, 310, and 313, and 21 CFR 110.

## APPENDIX N DRY DAIRY PRODUCTS

#### N.1 SCOPE

N.1.1 <u>Scope</u>. This appendix establishes the sanitation requirements for dry dairy products facilities. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

## N.2 APPLICABLE DOCUMENTS

N.2.1 <u>General</u>. The documents listed in this section are specified in sections 3, 4, and 5 of this appendix. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3, 4, and 5 of this appendix, whether or not they are listed.

N.2.2 <u>Government documents</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

# U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, PUBLIC HEALTH SERVICE

U.S. Public Health Service Publication 229 Grade "A" Pasteurized Milk Ordnance, 1997 Revision

(Application for copies should be addressed to U.S. Department of Health and Human Services, Public Health Service, Food and Drug Administration, Milk Safety Branch, 200 C Street SW, Washington, DC 20204.)

## NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

National Institute of Standards and Technology, Handbook 44

(Application for copies should be addressed to National Institute of Standards and Technology, 110 Bureau Drive, Gaithersburg, MD 20899-0001, http://www.nist.gov/.)

## CODE OF FEDERAL REGULATIONS (CFR)

Code of Federal Regulations (CFR), Title 21, Part 173.

(Application for copies should be addressed to Superintendent of Public Documents, U. S. Government Printing Office, Washington, DC 20402-0001, http://www.access.gpo.gov/nara/cfr/index.html/.)

N.2.3 <u>Non-Government publications</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents which are DoD adopted are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

## AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI/ASHRAE 52.1-1992-Gravimetric and Dust Spot Procedures for Testing Air Cleaning Devices Used in General Ventilation for Removing Particulate Matter

(Application for copies should be addressed to American National Standards Institute, 11 West 42nd Street, New York, NY 10036, http://www.ansi.org/.)

## N.3 DEFINITIONS

The definitions in section 3 of this standard apply to this appendix.

## N.4 GENERAL REQUIREMENTS

See Appendix A.

## N.5 DETAIL REQUIREMENTS

N.5.1 <u>General</u>. The requirements in Table I shall be as specified in U.S. Public Health Service Publication 229 (PMO) and 21 CFR 173, but are not intended to be all-inclusive.

APPENDIX A PARAGRAPH	REQUIREMENT
E1	Milk shall originate from herds accredited Tuberculosis-free, Brucellosis-free, and be from countries/regions determined to be acceptable. (PMO, Sec. 8).
E1	The source of water, vitamins, flavorings, etc. shall meet standards. (Sec. 7, Item 7p and Appendices A, G and K).
B7, H6	A system of tagging or recording tanker trucks that have been cleaned and sanitized must be established and maintained for 15 days. (Sec. 7, Item 12p).
E1	Upon arrival, raw milk and/or raw products for pasteurization shall comply with bacteriological, chemical and temperature standards of Sec. 7, Table 1.
E4	Raw milk and milk products shall be screened for drug residue. (Sec. 6 and Table 1).

Table I. Dry Dairy Products Plant Requirements	Table I.	Dry Dair	y Products	Plant Rec	juirements
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Table I.	Dry	/ Dairy	Products	Plant	Requ	irements	- Continued.

E2	Raw milk and milk products shall be held at 45° F (7° C) until processed. (Sec. 7, Item 17p).
E2	Condensed milk shall be held at $45^{\circ}$ F (7° C) or less. (Sec. 7, Item 17p).
E2	Whey for condensing shall be maintained at $45^{\circ}$ F (7° C) or less; or $145^{\circ}$ F
	(63° C) or greater until processed. (Sec. 7, Item 17p and Table 1).
50	Condensed whey shall be cooled during the crystallization process to 45° F
E2	(7° C) or less within 18 hours of condensing. (Sec. 7, Item 17p and Table 1).
	If the surge tanks or balance tanks are used between the evaporator and the
50	drier, such tanks shall hold the product at 150° F (66° C) or above, or shall be
E2	cleaned at least once every 4 hours of operation (see exception for acid type
	whey or pH factor). (Sec. 7, Item 17p).
<b>G</b> 2	Welded portions of food contact surfaces shall be smooth and free from pits,
C3	cracks, or inclusions. (Sec. 7, Item 10p).
	All milk contact surfaces of multi-use containers and equipment shall be
<b>C</b> 2	constructed of American Iron and Steel Institute (AISI) 300 series stainless
C2	steel or other non-corrosive material as described in the PMO.
	(Sec. 7, Item 11p).
C5	Equipment shall be designed to protect against surface and overhead
	contamination. (Sec. 7, Item 11p).
P7	Raw milk storage tanks shall be cleaned when emptied and shall be emptied at
B7	least every 72 hours. (Sec. 7, Item 12p).
C7	Storage tanks used to store raw milk or heat-treated milk products shall be
	equipped with a 7 day temperature recording device. (Sec. 7, Item 12p).
C5	Pasteurizing equipment complies with the sanitary design and construction
	standards of the Pasteurized Milk Ordinance (PMO). (Sec. 7, Item 11p).
E2	Pasteurization equipment and controls testing shall be performed in
	accordance with the PMO. (Appendix F).
H8	Pasteurization recording charts shall be maintained on file at the processing
	plant. (Sec. 7, Item 16p(E)).
C7	Thermometers shall meet requirements. (Sec.7, Item 16p(A) & 16p(B),
	Appendix E).
E2, H8	Recording Charts shall be complete and maintained. (Sec. 7, Item 16p).
C4	Equipment shall be constructed to ensure static accumulations are limited.
	(Sec. 7, Item 11p).
B2	Rollers and collectors shall be located in a room separate from other
	operations to prevent airborne contamination. (Sec. 7, Item 5p).
C1	Conveying equipment shall be cleaned at least daily. (Sec. 7, Item 12p).
<u>C1</u>	Sifter screens shall be easily removed and kept clean. (Sec. 7, Item 12p).
C5	The plant air filtration system shall meet requirements. (Sec.7, Item 4p).
E2	Cooling water used in a cooling tower shall not be used where it will come in
L2	direct contact with products (cooling products). (Sec. 7, Item 7p).

Table I.	Dry Dair	y Products Plant Requirements - Continued.

E2	Safeguards shall be in place to preclude the contamination of finished products during filling. (Sec. 7, Item 18p).			
E2	The topping off of containers to obtain the proper weight shall be done in a sanitary manner. (Sec. 7, Items 15p and 18p).			
E1	Ingredients from damaged containers shall be reprocessed prior to being repackaged. (Sec. 7, Item 15p).			
C8	Culinary steam shall be in accordance with PMO. (Sec. 7, Item 16p(B)).			
B8	Boiler water additives shall comply with 21 CFR 173.310.			
C8	Air under pressure shall be in accordance with 3-A Accepted Practices. (Appendix C).			
E2	There shall be no cross-connection or direct contamination of pasteurized milk or milk product. (Sec. 7, Item 15p).			
B6, C5	All openings, including valves, pipes, milk tanker trucks, etc. shall be capped or otherwise protected. (Sec. 7, Item 15p(A)).			
E2 & E5	Re-circulated cooling water shall be protected from contamination. (Sec. 7, Item 7p).			
E4	Re-circulated cooling water shall be tested once per six-month period. (Appendix D and Appendix G).			
C7	Clean-in-place (CIP) systems shall be in compliance with PMO. CIP systems shall have a recording device installed in the return solution line or other appropriate area to record the temperature and time which the line or equipment is exposed to cleaning and sanitizing solution (retained for 3 months). (Sec. 7, Item 12p).			
H6, H7, H8, H9	Record of CIP cleaning process shall be maintained for recirculated cleaning			
В3	Plants where containers are manually cleaned shall have a two compartment sink and a steam cabinet to sanitize containers or a three compartment sink if a chemical sanitizer is used. (Sec. 7, Item 12p).			
E4, H8	Pasteurized milk and/or milk products shall comply with bacteriological, chemical and temperature standards of Sec. 7. This shall be recorded and records maintained. (Sec. 7, and Table 1.).			
E4, H8	Residual bacteria counts for multi-use and single-service containers shall meet the standards listed in the PMO. This shall be recorded and records maintained. (Sec. 7, Item 12p).			
В5	Poisonous or toxic materials shall not be stored in any room where milk or milk products are received, processed, pasteurized or stored. (Sec. 7, Item 15p(A)).			
В5	Only approved rodenticides and insecticides shall be used. (Sec. 7, Item 15p(A)).			

## Table I. <u>Dry Dairy Products Plant Requirements</u> - Continued.

	Employee habits and dress, particularly the use of special clothing while
A10	handling or in contact with products or product contact surfaces, shall be
	appropriate. (Sec. 7, Item 20p).

NOTE: Cited reference documents for the above are USPHS Publication 229 and 21 CFR 173.

## APPENDIX P FRESH-CUT PRODUCE

## P.1 SCOPE

P.1.1 <u>Scope</u>. This appendix establishes the sanitation requirements for fresh-cut produce processing facilities. This appendix is a mandatory part of this standard. The information contained herein is intended for compliance.

## P.2 APPLICABLE DOCUMENTS

P.2.1 <u>General</u>. The documents listed in this section are specified in sections 3, 4, and 5 of this appendix. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3, 4, and 5 of this appendix, whether or not they are listed.

P.2.2 <u>Government documents</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

CODE OF FEDERAL REGULATIONS (CFR)

Code of Federal Regulations (CFR), Title 21, Part 110.

(Application for copies should be addressed to Superintendent of Public Documents, U. S. Government Printing Office, Washington, DC 20402-0001, http://www.access.gpo.gov/nara/cfr/index.html/.)

Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables, Guidance for Industry, Oct 98, U. S. Department of Health and Human Services, Food and Drug Administration, Center for Food Safety and Applied Nutrition (CFSAN).

(Application for copies should be addressed to Food Safety Initiative Staff, HFS-32, U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition, 200 C Street SW, Washington, DC 20204, http://www.foodsafety.gov/~dms/prodguide.html/.)

P.2.3 <u>Non-Government publications</u>. The following documents form a part of this document to the extent specified herein. Unless otherwise specified (see 6.2), the issues of the documents which are DoD adopted are those listed in the issue of DoDISS cited in the solicitation. Unless otherwise specified (see 6.2), the issues of documents not listed in the DoDISS are the issues most current in publication.

Food Safety Guidelines for the Fresh-Cut Produce Industry, 1996, Third Edition, International Fresh-Cut Produce Association (IFPA)

Assessment of the Risk of Botulism Contributed by Modified Atmosphere Packaging of Fresh-Cut Produce, 1993, A Report Prepared by the International Fresh-Cut Produce Association (IFPA)

(Application for copies of the two documents above should be addressed to International Fresh-cut Produce Association (IFPA), 1600 Duke Street, Suite 440, Alexandria, VA 22314, http://www.fresh-cuts.org/publications1329/publications.htm/.)

Fresh Cut Produce Handling Guidelines, 1997, International Fresh-Cut Produce Association (IFPA) and Produce Marketing Association

(Application for copies of this document should be addressed to International Fresh-cut Produce Association (IFPA), 1600 Duke Street, Suite 440, Alexandria, VA 22314, http://www.fresh-cuts.org/publications1329/publications.htm/, or Produce Marketing Association, P.O. Box 6036, Newark, DE 19714.)

Voluntary Food Safety Guidelines for Fresh Produce, Voluntary Guidelines for Minimizing Microbial Contamination in Fresh Produce, 1997, International Fresh-Cut Produce Association (IFPA) and Western Growers Association (WGA)

(Application for copies of this document should be addressed to International Fresh-cut Produce Association (IFPA), 1600 Duke Street, Suite 440, Alexandria, VA 22314, http://www.fresh-cuts.org/publications1329/publications.htm/, or Western Growers Association, 17620 Fitch Street, Irvine, CA 92614.)

Postharvest Chlorination - Basic Properties and Key Points for Distribution 1997

(Application for copies should be addressed to University of California, Davis, Dept. of Vegetable Crops, Div. Of Agriculture and Natural Resources, Attn: Trevor Suslow, Extension Specialist, One Shields Avenue, Davis, CA 95616, http://anrcatalog.ucdavis.edu/specials.ihtml/.)

## P.3 DEFINITIONS

The definitions in section 3 of this standard apply to this appendix.

## P.4 GENERAL REQUIREMENTS

See Appendix A.

## P.5 DETAILED REQUIREMENTS

P.5.1 <u>General</u>. The requirements in Table I shall be as specified in the above references, but are not intended to be all-inclusive.

APPENDIX A PARAGRAPH	REQUIREMENT
E2	Trimming, coring, cutting and culling operations shall be performed in a sanitary manner. (21 CFR 110.35, 110.37, 110.40)
E2, E4, H6	<ul> <li>Wash water chlorine level parameter shall be established and monitored at 100</li> <li>150 ppm total chlorine or 2 - 7 ppm free chlorine; max 200 ppm. (Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables; Food Safety Guidelines for the Fresh-Cut Produce Industry.)</li> </ul>
E4, H6	Wash water pH level parameter shall be established and monitored at 6.0 - 7.0. (Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables; Food Safety Guidelines for the Fresh-Cut Produce Industry.)
E2, H6	Wash water temperature range shall be established and monitored at 33° F - 36° F (0° C - 2° C) higher temperature than the product, to preclude pressure differential. (Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables; Food Safety Guidelines for the Fresh-Cut Produce Industry.)
E2, H6	Product contact time shall be established and monitored (dump tank, submersion, sprayer, flume, hydrocooler method). (Food Safety Guidelines for the Fresh-Cut Produce Industry; Postharvest Chlorination - Basic Properties and Key Points for Effective Distribution.)
E2, H6	Water recirculation method shall be established and monitored (filtration, displacement, replacement). (Food Safety Guidelines for the Fresh-Cut Produce Industry; Postharvest Chlorination - Basic Properties and Key Points for Effective Distribution.)
E2	Only approved treatment process water additive(s) shall be used. (Food Safety Guidelines for the Fresh-Cut Produce Industry.)
E4	Alternative method of disinfecting treatment process water (ozone, chlorine dioxide, ultraviolet treatment) shall be effectively performed. (Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables; Food Safety Guidelines for the Fresh-Cut Produce Industry; Postharvest Chlorination - Basic Properties and Key Points for Effective Distribution.)
E2, H6	Dewatering, centrifugation, or drying method shall be established and monitored for effectiveness. (Food Safety Guidelines for the Fresh-Cut Produce Industry.)
E5, H6	Method(s) to exclude physical contaminants shall be established and monitored (metal detector, visual screening, sieves). (Food Safety Guidelines for the Fresh-Cut Produce Industry).

## Table I. Fresh-Cut Produce Requirements.

Table I. Fresh-Cut Produce Requirements - Continued.

E2	Holding time throughout the entire process, especially post-wash and prior to packaging (weighing, transporting, collecting), shall be minimized. (Handling Guidelines for Fresh Cut Produce; IFPA/WGA Voluntary Food Safety Guidelines for Fresh Produce).
E2, H6	Packaging materials shall be made of approved material, shall be gas- permeable and shall preclude packaging migration, the entrance of foreign materials, spoilage prior to toxin production and avoid anaerobic respiration. (Food Safety Guidelines for the Fresh-Cut Produce Industry; IFPA/WGA Voluntary Food Safety Guidelines for Fresh Produce).
E2, H6	Parameters for modified atmosphere(s) packaging shall be established and monitored (e.g. 2 - 8% oxygen/5 - 15% carbon dioxide). (Food Safety Guidelines for the Fresh-Cut Produce Industry; Assessment of the Risk of Botulism Contributed by Modified Atmosphere Packaging of Fresh-Cut Produce).
E4, H8	Product testing protocol(s) shall be established and performed, and results shall be available (eColi, Listeria monocytogenes). (Food Safety Guidelines for the Fresh-Cut Produce Industry).

NOTE: Reference to the controlling documents are identified in parentheses.

## STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

**INSTRUCTIONS** 

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.

2. The submitter of this form must complete blocks 4, 5, 6, and 7, and send to preparing activity.

3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

document(s) or to amend contractual requirements.					
I RECOMMEND A CHANGE:	1. DOCUMENT NUMBER MIL-STD-3006	<b>2. DOCUMENT DATE (YYYYMMDD)</b> 20000820			
3. DOCUMENT TITLE SANITATION REQUIRE	EMENTS FOR FOOD ESTABLISHMENTS				
5. REASON FOR RECOMMENDATION					
6. SUBMITTER					
a. NAME (Last, First, Middle Initial)	b. ORGANIZATION	J			
c. ADDRESS (Include Zip Code)	d. TELEPHONE (Ir (1) Commercial	nclude Area Code) 7.DATE SUBMITTED (YYYYMMDD)			
	(2) AUTOVON (if applicable)				
8. PREPARING ACTIVITY					
a. NAME COL. S. SEVERIN	b. TELEPHONE <i>In</i> (1) Commercial (703) 681-305	(2) AUTOVON			
c. ADDRESS (Include Zip Code) DIRECTOR, DOD VETERINARY SERVICE ACTIVIT SURGEON GENERAL/HQ DA, 5109 LEESBURG PI FALLS CHURCH, VA 22041-3258	TY, OFFICE OF THE Defense Stand	ECEIVE A REPLY WITHIN 45 DAYS, CONTACT:Jardization Program Office (DLSC-LM)Kingman road, Suite 2533, Ft. Belvoir, VA 22060-25333) 767-6888AUTOVON 427-6888			