



Health Onboard Manual

September 2006

**Guidance Note
NI 516 DCM R01 E**

17 bis, Place des Reflets – La Défense 2 – 92400 Courbevoie
Postal Address : 92077 Paris La Défense Cedex
Tel. 33 (0) 1 42 91 52 91 – Fax. 33 (0) 1 42 91 53 20
Email : veristarinfo@bureauveritas.com
Web : <http://www.veristar.com>



MARINE DIVISION

GENERAL CONDITIONS

ARTICLE 1

1.1. - BUREAU VERITAS is a Society the purpose of whose Marine Division (the "Society") is the classification ("Classification") of any ship or vessel or structure of any type or part of it or system therein collectively hereinafter referred to as a "Unit" whether linked to shore, river bed or sea bed or not, whether operated or located at sea or in inland waters or partly on land, including submarines, hovercrafts, drilling rigs, offshore installations of any type and of any purpose, their related and ancillary equipment, subsea or not, such as well head and pipelines, mooring legs and mooring points or otherwise as decided by the Society.

The Society:

- prepares and publishes Rules for classification, Guidance Notes and other documents ("Rules");
- issues Certificates, Attestations and Reports following its interventions ("Certificates");
- publishes Registers.

1.2. - The Society also participates in the application of National and International Regulations or Standards, in particular by delegation from different Governments. Those activities are hereafter collectively referred to as "Certification".

1.3. - The Society can also provide services related to Classification and Certification such as ship and company safety management certification; ship and port security certification, training activities; all activities and duties incidental thereto such as documentation on any supporting means, software, instrumentation, measurements, tests and trials on board.

1.4. - The interventions mentioned in 1.1., 1.2. and 1.3. are referred to as "Services". The party and/or its representative requesting the services is hereinafter referred to as the "Client". **The Services are prepared and carried out on the assumption that the Clients are aware of the International Maritime and/or Offshore Industry (the "Industry") practices.**

1.5. - The Society is neither and may not be considered as an Underwriter, Broker in ship's sale or chartering, Expert in Unit's valuation, Consulting Engineer, Controller, Naval Architect, Manufacturer, Shipbuilder, Repair yard, Charterer or Shipowner who are not relieved of any of their expressed or implied obligations by the interventions of the Society.

ARTICLE 2

2.1. - Classification is the appraisalment given by the Society for its Client, at a certain date, following surveys by its Surveyors along the lines specified in Articles 3 and 4 hereafter on the level of compliance of a Unit to its Rules or part of them. This appraisalment is represented by a class entered on the Certificates and periodically transcribed in the Society's Register.

2.2. - Certification is carried out by the Society along the same lines as set out in Articles 3 and 4 hereafter and with reference to the applicable National and International Regulations or Standards.

2.3. - It is incumbent upon the Client to maintain the condition of the Unit after surveys, to present the Unit for surveys and to inform the Society without delay of circumstances which may affect the given appraisalment or cause to modify its scope.

2.4. - The Client is to give to the Society all access and information necessary for the performance of the requested Services.

ARTICLE 3

3.1. - The Rules, procedures and instructions of the Society take into account at the date of their preparation the state of currently available and proven technical knowledge of the Industry. They are not a code of construction neither a guide for maintenance or a safety handbook.

Committees consisting of personalities from the Industry contribute to the development of those documents.

3.2. - The Society only is qualified to apply its Rules and to interpret them. Any reference to them has no effect unless it involves the Society's intervention.

3.3. - The Services of the Society are carried out by professional Surveyors according to the Code of Ethics of the Members of the International Association of Classification Societies (IACS).

3.4. - The operations of the Society in providing its Services are exclusively conducted by way of random inspections and do not in any circumstances involve monitoring or exhaustive verification.

ARTICLE 4

4.1. - The Society, acting by reference to its Rules:

- reviews the construction arrangements of the Units as shown on the documents presented by the Client;
- conducts surveys at the place of their construction;
- classes Units and enters their class in its Register;
- surveys periodically the Units in service to note that the requirements for the maintenance of class are met.

The Client is to inform the Society without delay of circumstances which may cause the date or the extent of the surveys to be changed.

ARTICLE 5

5.1. - The Society acts as a provider of services. This cannot be construed as an obligation bearing on the Society to obtain a result or as a warranty.

5.2. - The certificates issued by the Society pursuant to 5.1. here above are a statement on the level of compliance of the Unit to its Rules or to the documents of reference for the Services provided for.

In particular, the Society does not engage in any work relating to the design, building, production or repair checks, neither in the operation of the Units or in their trade, neither in any advisory services, and cannot be held liable on those accounts. Its certificates cannot be construed as an implied or express warranty of safety, fitness for the purpose, seaworthiness of the Unit or of its value for sale, insurance or chartering.

5.3. - The Society does not declare the acceptance or commissioning of a Unit, nor of its construction in conformity with its design, that being the exclusive responsibility of its owner or builder, respectively.

5.4. - The Services of the Society cannot create any obligation bearing on the Society or constitute any warranty of proper operation, beyond any representation set forth in the Rules, of any Unit, equipment or machinery, computer software of any sort or other comparable concepts that has been subject to any survey by the Society.

ARTICLE 6

6.1. - The Society accepts no responsibility for the use of information related to its Services which was not provided for the purpose by the Society or with its assistance.

6.2. - **If the Services of the Society cause to the Client a damage which is proved to be the direct and reasonably foreseeable consequence of an error or omission of the Society, its liability towards the Client is limited to ten times the amount of fee paid for the Service having caused the damage, provided however that this limit shall be subject to a minimum of eight thousand (8,000) Euro, and to a maximum which is the greater of eight hundred thousand (800,000) Euro and one and a half times the above mentioned fee.**

The Society bears no liability for indirect or consequential loss such as e.g. loss of revenue, loss of profit, loss of production, loss relative to other contracts and indemnities for termination of other agreements.

6.3. - All claims are to be presented to the Society in writing within three months of the date when the Services were supplied or (if later) the date when the events which are relied on of were first known to the Client, and any claim which is not so presented shall be deemed waived and absolutely barred.

ARTICLE 7

7.1. - Requests for Services are to be in writing.

7.2. - **Either the Client or the Society can terminate as of right the requested Services after giving the other party thirty days' written notice, for convenience, and without prejudice to the provisions in Article 8 hereunder.**

7.3. - The class granted to the concerned Units and the previously issued certificates remain valid until the date of effect of the notice issued according to 7.2. hereabove subject to compliance with 2.3. hereabove and Article 8 hereunder.

ARTICLE 8

8.1. - The Services of the Society, whether completed or not, involve the payment of fee upon receipt of the invoice and the reimbursement of the expenses incurred.

8.2. - **Overdue amounts are increased as of right by interest in accordance with the applicable legislation.**

8.3. - **The class of a Unit may be suspended in the event of non-payment of fee after a first unfruitful notification to pay.**

ARTICLE 9

9.1. - The documents and data provided to or prepared by the Society for its Services, and the information available to the Society, are treated as confidential. However:

- Clients have access to the data they have provided to the Society and, during the period of classification of the Unit for them, to the **classification file** consisting of survey reports and certificates which have been prepared at any time by the Society for the classification of the Unit;
- copy of the documents made available for the classification of the Unit and of available survey reports can be handed over to another Classification Society Member of the International Association of Classification Societies (IACS) in case of the Unit's transfer of class;
- the data relative to the evolution of the Register, to the class suspension and to the survey status of the Units are passed on to IACS according to the association working rules;
- the certificates, documents and information relative to the Units classed with the Society may be reviewed during IACS audits and are disclosed upon order of the concerned governmental or inter-governmental authorities or of a Court having jurisdiction.

The documents and data are subject to a file management plan.

ARTICLE 10

10.1. - Any delay or shortcoming in the performance of its Services by the Society arising from an event not reasonably foreseeable by or beyond the control of the Society shall be deemed not to be a breach of contract.

ARTICLE 11

11.1. - In case of diverging opinions during surveys between the Client and the Society's surveyor, the Society may designate another of its surveyors at the request of the Client.

11.2. - Disagreements of a technical nature between the Client and the Society can be submitted by the Society to the advice of its Marine Advisory Committee.

ARTICLE 12

12.1. - Disputes over the Services carried out by delegation of Governments are assessed within the framework of the applicable agreements with the States, international Conventions and national rules.

12.2. - Disputes arising out of the payment of the Society's invoices by the Client are submitted to the Court of Nanterre, France.

12.3. - **Other disputes over the present General Conditions or over the Services of the Society are exclusively submitted to arbitration, by three arbitrators, in London according to the Arbitration Act 1996 or any statutory modification or re-enactment thereof. The contract between the Society and the Client shall be governed by English law.**

ARTICLE 13

13.1. - These General Conditions constitute the sole contractual obligations binding together the Society and the Client, to the exclusion of all other representation, statements, terms, conditions whether express or implied. They may be varied in writing by mutual agreement.

13.2. - The invalidity of one or more stipulations of the present General Conditions does not affect the validity of the remaining provisions.

13.3. - The definitions herein take precedence over any definitions serving the same purpose which may appear in other documents issued by the Society.

Table of Contents

1.0 ***General***

1.100 ***Introduction***

1.200 ***Definition***

2.0 ***Health Onboard Attestation***

2.100 ***References***

2.200 ***Health Onboard Attestation***

2.300 ***Audit procedures***

3.0 ***Risk based management***

3.100 ***Management responsibility***

3.100.1 ***Food safety Policy***

3.100.2 ***Top management duty***

3.100.3 ***Food safety management system planning***

3.100.4 ***Management review***

3.200 ***Documentation***

3.300 ***Prerequisite Programms***

3.400 ***Hazard analysis***

3.500 ***Monitoring / validation and improvement of
the food safety management system***

3.500.4 ***Analysis of results of verification activities***

4.0 ***Gastrointestinal Illness Surveillance***

4.1 ***Data Collection***

4.1.1 ***Reportable Cases***

4.1.2 ***Records***

4.1.2.1 ***Log***

4.1.2.2 ***Questionnaires***

4.1.2.3 ***Retention***

4.1.2.4 ***Confidentiality***

4.2 ***Notification***

4.2.1 ***Routine Report***

4.2.1.1 ***Routine Report Timing***

4.2.1.2 ***Report Contents***

4.2.2 ***Special Report***

4.2.2.1 ***Special Report Timing***

4.2.2.2 ***Special Notification***

4.2.3 Report Retention

4.3 Clinical specimens

4.3.1 Clinical specimens submission

4.3.1.1 specimen / shipping containers

4.3.2 Clinical specimen submission collection procedures

4.3.2.1 when to collect

4.3.2.2 proper packing

4.4 Requirements for Isolating Symptomatic and Primary Contacts of Crew and Passengers with Gastroenteritis

4.4.1 Crew, Staff, Officers and other Employees

4.4.1.1 isolate ill crew

4.4.1.2 cabin mates/ contacts

4.4.2 Passengers

4.4.2.1 Isolate ill passengers

5.0 Potable Water

5.1 Source

5.1.1 Bunkering

5.1.1.1 Standards

5.1.1.2 Sample Reports

5.1.2 Water Production

5.1.2.1 Location

5.1.100 Desalination

5.1.101 Hot water production

5.2 Bunker and Production Halogenation

5.2.1 Procedures

5.2.1.1 Residual Halogen

5.2.1.2 Monitoring

5.2.100 Halogen injection system

5.3 Potable Water System

5.3.1 Potable Water Tanks

5.3.1.100 Design

5.3.1.1 Protection

5.3.1.2 Tank Construction

5.3.1.101 Maintenance

5.3.2 Potable Water Piping

5.3.2.100 Design

5.3.2.101 Maintenance

5.3.2.1 Protection

5.3.100 Sanitary equipments:

5.3.3 Potable Water Hoses

5.3.3.1 Construction

5.3.3.2 Handling

5.3.101 Pump station

5.3.102 Softening station

5.3.4 Potable Water System Contamination

5.3.4.1 Cleaning and Disinfection

5.4 Potable Water System Halogenation

- 5.4.1 Halogenation Devices**
 - 5.4.1.1 Construction and Installation
 - 5.4.1.2 Operation
- 5.5 Potable Water System Halogen Monitoring**
 - 5.5.1 Halogen Analyzer-Chart Recorder**
 - 5.5.1.1 Installation
 - 5.5.1.2 Operation
 - 5.5.2 Halogen Analyzer Charts**
 - 5.5.2.1 Chart Design
 - 5.5.2.2 Operation
 - 5.5.3 Manual Halogen Monitoring**
 - 5.5.3.1 Equipment Failure
- 5.6 Microbiologic Monitoring**
 - 5.6.1 Sampling and Analysis**
 - 5.6.1.1 Methodology
 - 5.6.1.2 Records
- 5.7 Water distribution system protection**
 - 5.7.1 Cross-connection control**
 - 5.7.1.1 Program
 - 5.7.1.2 Device installation
 - 5.7.1.3 Air Supply Connections
 - 5.7.2 Backflow-Preventer Inspection and Testing**
 - 5.7.2.1 Maintenance
 - 5.7.2.2 Inspection and Service

6.0 Swimming Pools and Whirlpool Spas

- 6.1 Flow-Through Seawater Swimming Pools**
 - 6.1.1 Operation**
 - 6.1.1.1 At Sea
 - 6.1.1.2 In Port
- 6.2 Recirculating Swimming Pools**
 - 6.2.1 Operation**
 - 6.2.1.1 Filters
 - 6.2.1.2 Water Quality
 - 6.2.2 Halogenation**
 - 6.2.2.1 Residual Halogen
 - 6.2.2.2 Residual Halogen Monitoring
- 6.3 Whirlpool Spas**
 - 6.3.1 Public Operations**
 - 6.3.1.1 Filters
 - 6.3.1.2 Water Quality
 - 6.3.2 Halogenation**
 - 6.3.2.1 Residual Halogen
 - 6.3.2.2 Residual Halogen Monitoring
 - 6.3.3 Private Cabin Operations**
 - 6.3.3.1 Maintenance
 - 6.3.4 Individual Hydrotherapy Pools**
 - 6.3.4.1 Maintenance
- 6.4 Safety**
 - 6.4.1 Public Swimming Pools and Whirlpool Spas**

- 6.4.1.1 Signs and Markings
- 6.4.1.2 Equipment
- 6.4.1.3 Restrictions

7.0 Food Safety

7.1 Reserved

7.2 Personnel

7.2.1 Food-Safety Management

- 7.2.1.1 Food-Safety Knowledge
- 7.2.1.2 Food-Safety Duties

7.2.2 Employee Health

- 7.2.2.1 Communicable Diseases and Symptoms

7.2.3 Employee Cleanliness

- 7.2.3.1 Hands and Arms
- 7.2.3.2 Fingernails
- 7.2.3.3 Jewelry
- 7.2.3.4 Outer Clothing

7.2.4 Hygienic Practices

- 7.2.4.1 Eating, Drinking, or Using Tobacco
- 7.2.4.2 Hair Restraints

7.2.101 Training

7.2.102 Infrastructure

7.3 Food

7.3.1 Food Condition

- 7.3.1.1 Safe and Unadulterated

7.3.2 Food Sources

- 7.3.2.1 Lawful Sourcing
- 7.3.2.2 Receiving Condition
- 7.3.2.3 Maintaining Molluscan Shellfish Identification

7.3.3 Food Protection

- 7.3.3.1 Employee Contamination
- 7.3.3.2 Food and Ingredient Contamination
- 7.3.3.3 Ice as Coolant
- 7.3.3.4 Equipment, Utensils, and Linens
- 7.3.3.5 Food Storage and Preparation
- 7.3.3.6 Food Display and Service
- 7.3.3.7 Other Contamination

7.3.4 Pathogen Destruction

- 7.3.4.1 Cooking Temperatures / Times
- 7.3.4.2 Parasite Destruction
- 7.3.4.3 Reheating

7.3.5 Food Holding Temperatures and Times

- 7.3.5.1 Frozen, Slacking and Thawing Procedures
- 7.3.5.2 Food Cooling
- 7.3.5.3 Food Holding Temperatures and Times

7.3.6 Consumer Information

- 7.3.6.1 Advisory

7.3.7 Contaminated Food

- 7.3.7.1 Discarding Food

7.3.100 BACKSAMPLE

7.4 Equipment and Utensils

7.4.1 Materials

- 7.4.1.1 Multiuse Characteristics and Use Limitations

7.4.1.2	Single-Service and Single-Use Characteristics
7.4.2	Design and Construction
7.4.2.1	Durability and Strength
7.4.2.2	Cleanability
7.4.2.100	<i>Extra requirements</i>
7.4.2.3	Accuracy
7.4.2.4	Functionality
7.4.2.5	Food Equipment, Standards and Classification
7.4.3	Numbers and Capacities
7.4.3.1	Cooling, Heating, and Holding Capacities
7.4.3.2	Ventilation Hood Systems
7.4.3.3	Utensils, Consumer Self-Service
7.4.3.4	Food Temperature Measuring Devices
7.4.4	Equipment Location and Installation
7.4.4.1	Fixed Equipment, Spacing or Sealing
7.4.4.2	Fixed Equipment, Elevation or Sealing
7.4.5	Maintenance and Operation
7.4.5.1	Equipment
7.4.5.2	Good Repair and Calibration
7.4.5.3	Single-Service and Single-Use Articles
7.5	Warewashing and Laundering
7.5.1	[Reserved]
7.5.2	Warewashing Design and Construction
7.5.2.1	Warewashing Measuring Device Accuracy
7.5.2.2	Warewashing Functionality
7.5.3	Warewashing Numbers and Capacities
7.5.3.1	Three-Compartment Sinks
7.5.3.2	Drainboards
7.5.3.3	Sanitizing Solutions, Testing Devices
7.5.4	Warewashing Equipment Maintenance and Operation
7.5.4.1	Good Repair and Proper Adjustment
7.5.4.2	Wash Temperatures
7.5.5	Cleaning Equipment and Utensils
7.5.5.1	Cleaning Frequency
7.5.5.2	Dry Cleaning Methods
7.5.5.3	Precleaning and Racking
7.5.5.4	Wet Cleaning
7.5.5.5	Alternative Manual Warewashing Procedures
7.5.5.6	Rinsing Procedures
7.5.6	Sanitizing
7.5.6.1	Sanitizing Temperatures
7.5.6.2	Sanitizing Concentrations
7.5.7	Protection of Clean Items
7.5.7.1	Drying
7.5.7.2	Lubricating and Reassembling
7.5.7.3	Storing Equipment, Utensils, Linens, and Single-Service and Single-Use Articles
7.5.8	Laundering
7.5.8.1	Laundry Facilities
7.5.8.2	Laundry Procedures
7.6	Poisonous and Toxic Materials
7.6.1	Identification
7.6.1.1	Labeling
7.6.2	Operational Supplies and Applications
7.6.2.1	Storage
7.6.2.2	Use
7.6.2.3	Sanitizers and Other Food Area Chemicals
7.6.2.4	Pesticides and Rodenticides
7.6.3	Medicines

7.6.3.1 Restriction and Storage

7.7 Facilities

7.7.1 Handwashing and Toilet Facilities

7.7.1.1 Handwashing Facility Installation

7.7.1.2 Toilet Facility Installation

7.7.1.3 Handwashing and Toilet Facility Maintenance

7.7.1.100 *Handwashing extra requirements*

7.7.2 Solid Waste

7.7.2.1 Receptacles and Containers

7.7.2.100 *Trash containers*

7.7.2.2 Garbage and Refuse Storage Room

7.7.3 Liquid Waste Disposal and Plumbing

7.7.3.1 Drain Lines

7.7.3.2 Liquid Waste Disposal

7.7.3.3 Plumbing

7.7.4 Decks, Bulkheads, and Deckheads

7.7.4.1 Design and Construction

7.7.4.100 *Extra requirements*

7.7.4.2 Maintenance

7.7.5 Lighting

7.7.5.1 Intensity

7.7.5.2 Protected

7.7.6 Ventilation

7.7.6.1 Design and Operation

7.7.6.2 Maintenance

7.7.7 Cleaning Equipment and Unnecessary Articles

7.7.7.1 Storage

8.0 Integrated Pest Management

8.1 Integrated Pest Management

8.1.1 Plan Development and Implementation

8.1.1.1 IPM Plans

8.1.1.2 Plan Evaluation

8.1.2 IPM and Pesticide Use

8.1.2.1 Pesticide Application

8.2 Pest Control

8.2.1 Exclusion

8.2.1.1 Food Areas

8.2.2 Control Measures

8.2.2.1 Chemical

8.2.2.2 Physical

9.0 Housekeeping

9.1 Infection-Control Procedures

9.1.1 Disinfection

9.1.1.1 Public Areas

9.1.2.1 Cabins

- 9.2 Air Systems**
 - 9.2.1 Design and Maintenance**
 - 9.2.1.1 Construction
 - 9.2.1.100 *Construction extra requirements*
 - 9.2.1.2 Maintenance
 - 9.2.1.200 *Maintenance extra requirements*
 - 9.2.1.3 Dust Control
 - 9.3 Fountains, Humidifiers, and Showers**
 - 9.3.1 Fountains and Humidifiers**
 - 9.3.1.1 Water Source
 - 9.3.1.2 Fountain and Water Spray Maintenance
 - 9.3.2 Hot-Water System and Showers**
 - 9.3.2.1 Maintenance

10.0 Child-Activity Centers

- 10.1 Diaper Changing**
 - 10.1.1 Diaper-Changing Facilities**
 - 10.1.1.1 Design
 - 10.2 Toilet and Handwashing**
 - 10.2.1 Facilities**
 - 10.2.1.1 Design
 - 10.3 Cleaning and Disinfection**
 - 10.3.1 Furnishings and Toys**
 - 10.3.1.1 Construction
 - 10.3.1.2 Procedures
 - 10.4 Exclusions**
 - 10.4.1 Children with Infectious Illness**
 - 10.4.1.1 Procedures

1.0 *General*

1.100 *Introduction*

Public health has always been a major concern for shipping industry in general and for cruise in particular. Numerous outbreaks of infectious disease were reported to be associated with ships during the last decades. Cargo and passenger vessels have often been affected with serious operational and financial consequences.

Food is well known to be the most common source of contamination. However there are a great number of other sources to be mentioned, such as **water systems**, with in particular sanitary hot water systems, and **air conditioning systems**.

Companies related to tourism (i.e. hotels, cruise ships, air lines) being aware of the serious impact an incident of contamination, once it occurs, may have on their image, may need to seek for available and easy to implement tools, to assess and reduce such risks.

Based on the above mentioned facts, Bureau Veritas, one of the world's leading certification companies, has developed over the last years a management program dealing with contamination risks. This **"Health Onboard"** program has been established, in order to assist Owners & Operators in the design, maintenance and monitoring of air and water systems, and has now been extended to food processing with the objective to control contamination. Through initial and periodical audits, action plans will be established in cooperation with the Owners/Operators in order to reach conformity with well established hygiene standards, and to anticipate potential risks related to the operation of the vessel.

The aim of this program is also to help the vessel to achieve conformity with **USPHS standard** as defined in Vessel Sanitation Program Operations Manual edited by the CDC (US Centers for Disease Control & Prevention).

The "Health Onboard" program is also setting processes for a better evaluation of the potentiel sanitary risk related to air & water networks. Necessary, corrective actions are proposed in order to respond to the possible findings and avoid repetition.

When initial audit results are deemed acceptable, or when non conformities have been corrected, **an attestation of conformity with BV's "Health Onboard" program will be issued to the vessel.**

This attestation, subject to annual audit verification, will be available to the Company/Operator to emphasize that a strong policy of control and limitation of risks of contamination has been implemented and efficiently enforced.

1.200

Definition**Authority**

"USPHS or PHS" means the U.S. Public Health Service.

Potable Water

"**Air-break**" means a piping arrangement in which a drain from a fixture, appliance, or device discharges indirectly into another fixture, receptacle, or interceptor at a point below the flood-level rim.

"**Air-gap**" means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture, or other device and the flood-level rim of the receptacle or receiving fixture. The air gap must be at least twice the diameter of the supply pipe or faucet or at least 3 cm (1 inch), whichever is greater.

"**Atmospheric vacuum breaker**" means an approved backflow prevention device that is necessary on a potable water outlet designed for an attachment that does not have a shutoff downstream from the attachment to preclude the possibility of backflow.

"**Backflow**" means the flow of water or other liquids, mixtures, or substance into the distribution pipes of a potable supply of water from any source or sources other than the source of potable water supply. Back-siphonage is one form of backflow.

"**Backflow, check, or non-return valve**" means a mechanical device installed in a waste line to prevent the reversal of flow under conditions of back pressure. In the check valve type, the flap should swing into a recess when the line is flowing full, to preclude obstructing the flow.

"**Backflow preventer**" means an approved backflow prevention device that is necessary on a potable water outlet.

"**Back-siphonage**" means the flowing back of used, contaminated, or polluted water from a plumbing fixture or vessel or other source into a water supply pipe as a result of negative pressure in the pipe.

"**Black water**" means wastewater from water closets (toilets).

"**Cross-connection**" means any physical connection between two otherwise separate piping systems that allows a flow from one system to the other.

"**Gray water**" means all domestic wastewater including water from showers, sinks, laundry, and equipment drains, but not wastewater from toilets.

"Halogen" means the group of elements including fluorine, chlorine, bromine, and iodine used for the disinfection of water.

"Harbor area" means that portion of a harbor set aside for vessel anchorage or for ports including wharves, piers, quays, and service areas, the boundaries are the highwater shore line, and others as determined by legal definition, citation of coordinates, or other means.

"Hose connection vacuum breaker" means an approved backflow preventer that attaches directly to a hose bib, has a single check with an atmospheric vent and is not designed for continuous pressure applications.

"mg/L" means milligrams per liter, which is the metric equivalent of parts per million (ppm).

"Non-potable fresh water (Technical water)" means fresh water intended for laundry use or for washing decks in areas other than the vessel's hospital or food service and food storage areas.

"Pollution" means the presence in water of any foreign substance (organic, inorganic, radiologic, or biologic) that tends to degrade water quality to create a health hazard.

"Potable water" means fresh water intended for drinking, washing, bathing, or showering; for use in the vessel's hospital; for handling, preparing, or cooking food; and for cleaning food storage and preparation areas, utensils, and equipment.

"Potable water tanks" means all tanks into which potable water is bunkered or produced for distribution and from which it is used as potable water.

"Reduced pressure backflow preventer" means an approved backflow device used in high hazard situations that has two independent check valves with an intermediate vacuum breaker and relief valve.

"Sewage" means any liquid waste containing animal or vegetable matter in suspension or solution, including liquids containing chemicals in solution.

"Specialty backflow preventer" means an approved backflow device used in low hazard situations that has two independent check valves with an intermediate vacuum breaker and relief valve.

Food Safety

Additive.

(a) **"Food additive"** has the meaning stated in the Federal Food, Drug, and Cosmetic Act, §201(s) and 21 CFR 170.

(b) **"Color additive"** has the meaning stated in the Federal Food, Drug, and Cosmetic Act, §201(t) and 21 CFR 70.

"Adulterated" has the meaning stated in the Federal Food, Drug, and Cosmetic Act, §402.

"Approved" means acceptable to the VSP based on a determination of conformity with principles, practices, and generally recognized standards that protect public health such as ANSI/NSF standards, ASSE standards, federal regulations or equivalent international standards and regulations.

"aw" means water activity which measures the free moisture in a food. It is the quotient of the water vapour pressure of the substance divided by the vapor pressure of pure water at the same temperature.

"Beverage" means a liquid for drinking, including water.

"Bottled drinking water" means water that is sealed in bottles, packages, or other containers and offered for sale and that is safe for human consumption, including bottled mineral water.

"Certification number" means a unique combination of letters and numbers assigned by a shellfish-control authority to a molluscan shellfish dealer according to the provisions of the National Shellfish Sanitation Program.

"CIP" means cleaned in place by circulating or flowing mechanically through a piping system of a detergent solution, water rinse, and sanitizing solution onto or over equipment surfaces that require cleaning, such as the method used, in part, to clean and sanitize a frozen dessert machine.

Nota: "CIP" does not include the cleaning of EQUIPMENT such as band saws, slicers, or mixers that are subjected to in place manual cleaning without the use of a CIP system.

"CFR" means Code of Federal Regulations. Citations in this Code to the CFR refer sequentially to the Title, Part, and Section numbers, such as 21 CFR 178.1010 refers to Title 21, Part 178, Section 1010.

"Code of Federal Regulations" means the compilation of the general and permanent rules published in the Federal Register by the executive departments and agencies of the federal government which:

- (a) Is published annually by the U.S. Government Printing Office; and
- (b) Contains FDA rules in 21 CFR, USDA rules in 7 CFR and 9 CFR, EPA rules in 40 CFR, and Wildlife and Fisheries rules in 50 CFR.

"Comminuted" means reduced in size by methods including chopping, flaking, grinding, or mincing.

"Comminuted" includes fish or meat products that are reduced in size and restructured or reformulated such as gefilte fish, gyros, ground beef, and sausage; and a mixture of 2 or more types of meat that have been reduced in size and combined, such as sausages made from 2 or more meats.

"Confirmed disease outbreak" means a foodborne or waterborne disease outbreak in which laboratory analysis of appropriate specimens identifies a causative agent and epidemiologic analysis implicates the food or water as the source of the illness.

"Consumer" means a person who is a member of the public, takes possession of food, is not functioning in the capacity of an operator of a food establishment or food processing plant, and does not offer the food for resale.

"Corrosion-resistant material" means a material that maintains acceptable surface cleanability characteristics under prolonged influence of the food to be contacted, the normal use of cleaning compounds and sanitizing solutions, and other conditions of the environment where the material is used.

"Critical-control point" means a point or procedure in a specific food system where loss of control may result in an unacceptable health risk.

"Critical limit" means the maximum or minimum value at a critical-control point to which a physical, biologic, or chemical parameter must be controlled to minimize the occurrence of risk from an identified food safety hazard.

"Drinking water" means water that meets 40 CFR 141 National Primary Drinking Water Regulations.

"Drinking water" is traditionally known as "potable water."

"Drinking water" includes the term "water" except where the term used connotes that the water is not potable, such as "boiler water," "mop water," "rainwater," "wastewater," and "nondrinking" water.

"Dry-storage area" means a room or area designated for the storage of packaged or containerized bulk food that is not potentially hazardous and dry goods such as singleservice items.

"Easily cleanable" means a characteristic of a surface that:

- (a) Allows effective removal of soil by normal cleaning methods;
- (b) Is dependent on the material, design, construction, and installation of the surface; and
- (c) Varies with the likelihood of the surface's role in introducing pathogenic or toxigenic agents or other contaminants into food based on the surface's approved placement, purpose, and use.

"Easily cleanable" includes a tiered application of the criteria that qualify the surface as easily cleanable as specified under Subparagraph (a) of this definition to different situations in which varying degrees of cleanability are required such as:

- (a) The appropriateness of stainless steel for a food preparation surface, compared with the lack of need for stainless steel to be used for floors or for tables used for consumer dining; or

(b) The need for a different degree of cleanability for a utilitarian attachment or accessory in the kitchen, compared with a decorative attachment or accessory in the consumer dining area.

"Easily movable" means:

- (a) Portable; mounted on casters, gliders, or rollers; or provided with a mechanical means to safely tilt a unit of equipment for cleaning; and
- (b) Having no utility connection, a utility connection that disconnects quickly, or a flexible utility connection line of sufficient length to allow the equipment to be moved for cleaning of the equipment and adjacent area.

"EPA" means the U.S. Environmental Protection Agency.

"Equipment" means an article used in the operation of a food establishment, such as a freezer, grinder, hood, ice maker, meat block, mixer, oven, reach-in refrigerator, scale, sink, slicer, stove, table, temperature measuring device for ambient air, vending machine, or warewashing machine.

"Equipment" does not include items used for handling or storing large quantities of packaged foods that are received from a supplier in a cased or overwrapped lot, such as hand trucks, forklifts, dollies, pallets, racks, and skids.

"Fish" means fresh or saltwater finfish, crustaceans, and other forms of aquatic life (including alligator, frog, aquatic turtle, jellyfish, sea cucumber, and sea urchin and the roe of such animals) other than birds or mammals, and all mollusks, if such animal life is intended for human consumption.

"Fish" includes an edible human food product derived in whole or in part from fish, including fish that have been processed in any manner.

"Food" means a raw, cooked, or processed edible substance, ice, beverage, or ingredient used or intended for use or for sale in whole or in part for human consumption, or chewing gum.

"Foodborne disease outbreak" means an incident in which:

- (a) 2 or more nonrelated persons experience a similar illness after ingesting a common food; and
- (b) Epidemiologic analysis implicates the food as the source of the illness.

"Foodborne disease outbreak" also includes a single case of illness such as 1 person ill from botulism or chemical poisoning.

"Food-contact surface" means:

- (a) A surface of equipment or a utensil with which food normally comes into contact; or
- (b) A surface of equipment or a utensil from which food may drain, drip, or splash into a food, or onto a surface normally in contact with food.

"Food employee" means a person working with unpackaged food, food equipment or utensils, or foodcontact surfaces.

"Food-processing plant" means a commercial operation that manufactures packages, labels, or stores food for human consumption and does not provide food directly to a consumer.

"Game animal" means an animal, the products of which are food, that is not classified as cattle, sheep, swine, goat, horse, mule, or other equine in 9 CFR Subchapter A

- Mandatory Meat Inspection, Part 301, as Poultry in 9 CFR Subchapter C - Mandatory Poultry Products Inspection, Part 381, or as fish as defined under Subparagraph 1-201.10(B)(25).

"Game animal" includes mammals such as reindeer, elk, deer, antelope, water buffalo, bison, rabbit, squirrel, opossum, raccoon, nutria, or muskrat, and nonaquatic reptiles such as land snakes.

"Game animal" does not include ratites such as ostrich, emu, and rhea.

"Grade A standards" means the requirements of the PHS/FDA "Grade A Pasteurized Milk Ordinance" and "Grade A Condensed and Dry Milk Ordinance" with which certain fluid and dry milk and milk products comply.

"General-use pesticide" means a pesticide that is not classified by EPA for restricted use as specified in 40 CFR 152.175.

"HACCP plan" means a written document that delineates the formal procedures for following the Hazard Analysis Critical Control Point principles developed by The National Advisory Committee on Microbiological Criteria for Foods.

"Hazard" means a biologic, chemical, or physical property that may cause an unacceptable consumer health risk.

"Hermetically sealed container" means a container that is designed and intended to be secure against the entry of microorganisms and, in the case of low-acid canned foods, to maintain the commercial sterility of its contents after processing.

"Imminent health hazard" means a significant threat or danger to health that is considered to exist when evidence is sufficient to show that a product, practice, circumstance, or event creates a situation that requires immediate correction or cessation of operation to prevent injury based on the number of potential injuries, and the nature, severity, and duration of the anticipated injury.

"Injected" means manipulating a meat so that infectious or toxigenic microorganisms may be introduced from its surface to its interior through

tenderizing with deep penetration or injecting the meat such as with juices which may be referred to as "injecting," "pinning," or "stitch pumping."

"Kitchenware" means food preparation and storage utensils.

"Law" means applicable local, state, federal, or other equivalent international statutes, regulations, and ordinances.

"Linens" means fabric items such as cloth hampers, cloth napkins, table cloths, wiping cloths, and work garments including cloth gloves.

"Meat" means the flesh of animals used as food including the dressed flesh of cattle, swine, sheep, or goats and other edible animals, *except fish, poultry, and wild game animals*.

"Molluscan shellfish" means any edible species of fresh or frozen oysters, clams, mussels, and scallops or edible portions thereof, *except when the scallop product consists only of the shucked adductor muscle*.

"Packaged" means bottled, canned, cartoned, securely bagged, or securely wrapped, whether packaged in a food establishment or a food-processing plant.

Nota: "Packaged" does not include a wrapper, carry-out box, or other nondurable container used to containerize food to facilitate food protection during service and receipt of the food by the consumer.

"Person in charge" means the individual present on a vessel who is responsible for the food operation at the time of inspection such as the Food and Beverage Manager, Food Manager, or Chef.

"Personal-care items" means items or substances that may be poisonous, toxic, or a source of contamination and are used to maintain or enhance a person's health, hygiene, or appearance.

"Personal-care items" include items such as medicines; first aid supplies; and other items such as cosmetics, and toiletries such as toothpaste and mouthwash.

"pH" means the symbol for the negative logarithm of the hydrogen ion concentration, which is a measure of the degree of acidity or basicity of a solution. Values between 0 and 7 indicate acidity and values between 7 and 14 indicate alkalinity. The value for pure distilled water is 7, which is considered neutral.

"Physical facilities" means the structure and interior surfaces of a vessel's food storage, preparation and service areas, including accessories such as soap and towel dispensers, and attachments, such as light fixtures and heating or air conditioning system vents.

"Plumbing fixture" means a receptacle or device that:

- (a) Is permanently or temporarily connected to the water distribution system of the vessel and demands a supply of water from the system; or
- (b) Discharges used water, waste materials, or sewage directly or indirectly to the drainage system of the vessel.

"Plumbing system" means the water supply and distribution pipes; plumbing fixtures and traps; soil, waste, and vent pipes; sanitary sewer drains and vessel drains, including their respective connections, devices, and appurtenances within the vessel; and water-treating equipment.

"Poisonous or toxic materials" means substances that are not intended for ingestion and are included in 4 categories:

- (a) Cleaners and sanitizers, which include cleaning and sanitizing agents and agents such as caustics, acids, drying agents, polishes, and other chemicals;
- (b) Pesticides *except sanitizers*, which include substances such as insecticides and rodenticides;
- (c) Substances necessary for the operation and maintenance of the establishment such as nonfood-grade lubricants and personal care items that may be deleterious to health; and
- (d) Substances that are not necessary for the operation and maintenance of the vessel and are on the vessel, such as petroleum products and paints.

"Potentially hazardous food" means a food that is natural or synthetic and that requires temperature control because it is in a form capable of supporting:

- (a) The rapid and progressive growth of infectious or toxigenic microorganisms;
- (b) The growth and toxin production of *Clostridium botulinum*; or
- (c) In raw shell eggs, the growth of *Salmonella enteritidis*.

"Potentially hazardous food" includes an animal food (a food of animal origin) that is raw or heat-treated; a food of plant origin that is heat-treated or consists of raw seed sprouts; cut melons; and garlic and oil mixtures that are not acidified or otherwise modified at a food processing plant in a way that results in mixtures that do not support growth as specified under Subparagraph (a) of this definition.

Nota: "Potentially hazardous food" does not include:

- (a) An air-cooled hard-boiled egg with shell intact;
- (b) A food with an aw value of 0.85 or less;
- (c) A food with a pH level of 4.6 or below when measured at 24°C (75°F);
- (d) A food in an unopened hermetically sealed container that is commercially processed to achieve and maintain commercial sterility under conditions of nonrefrigerated storage and distribution; and
- (e) A food for which laboratory evidence demonstrates that the rapid and progressive growth of infectious or toxigenic microorganisms or the growth of *S. enteritidis* in eggs or *C. botulinum* can not occur, such as a food that has an aw and a pH above the levels specified under Subparagraphs (c)(ii) and (iii) of this definition and that may contain a preservative, other barrier to the growth of microorganisms, or a combination of barriers that inhibit the growth of microorganisms.

(f) A food that may contain an infectious or toxigenic microorganism or chemical or physical contaminant at a level sufficient to cause illness, but that does not support the growth of microorganisms as specified under Subparagraph (a) of this definition.

"Poultry" means:

- (a) Any domesticated bird such as chicken, turkey, duck, goose, or guinea, whether live or dead, as defined in 9 CFR 381 Poultry Products Inspection Regulations; and
- (b) Any migratory waterfowl, game bird, or squab such as pheasant, partridge, quail, grouse, or guinea, whether live or dead, as defined in 9 CFR 362 Voluntary Poultry Inspection Program.

"Poultry" does not include ratite.

"Primal cut" means a basic major cut into which carcasses and sides of meat are separated, such as a beef round, pork loin, lamb flank, or veal breast.

"Ready-to-eat food" means food in a form that is edible without washing, cooking, or additional preparation by the food establishment or the consumer and that is reasonably expected to be consumed in that form.

"Ready-to-eat food" includes:

- (a) Potentially hazardous food that is unpackaged and cooked to the temperature and time required for the specific food;
- (b) Raw, washed, cut fruits and vegetables;
- (c) Whole, raw fruits and vegetables that are presented for consumption without the need for further washing, such as at a buffet; and
- (d) Other food presented for consumption for which further washing or cooking is not required and from which rinds, peels, husks, or shells are removed.

"Refuse" means solid waste not carried by water through the sewage system.

"Regulatory authority" means the local, state, or federal or equivalent international enforcement body or authorized representative having jurisdiction over the food processing, transportation, warehousing, or other food establishment.

"Restricted-use pesticide" means a pesticide product that contains the active ingredients specified in 40 CFR 152.175 Pesticides classified for restricted use, and that is limited to use by or under the direct supervision of a certified applicator.

"Safe material" means:

- (a) An article manufactured from or composed of materials that may not reasonably be expected to result, directly or indirectly, in their becoming a component or otherwise affecting the characteristics of any food;
- (b) An additive that is used as specified in §409 or 706 of the Federal Food, Drug, and Cosmetic Act; or
- (c) Other materials that are not additives and that are used in conformity with applicable regulations of the FDA.

"Sanitization" means the application of cumulative heat or chemicals on cleaned food-contact surfaces that, when evaluated for efficacy, is sufficient to yield a reduction of 5 logs, which is equal to a 99.999% reduction, of representative disease microorganisms of public health importance.

"Sealed" means free of cracks or other openings that allow the entry or passage of moisture.

"Sewage" means liquid waste containing animal or vegetable matter in suspension or solution and may include liquids containing chemicals in solution.

"Shellfish-control authority" means a state, federal, foreign, tribal, or other government entity legally responsible for administering a program that includes certification of molluscan shellfish harvesters and dealers for interstate commerce.

"Shellstock" means raw, in-shell molluscan shellfish.

"Shucked shellfish" means molluscan shellfish that have one or both shells removed.

"Single-service articles" means tableware, carry-out utensils, and other items such as bags, containers, placemats, stirrers, straws, toothpicks, and wrappers that are designed and constructed for one time, one person use.

"Single-use articles" means utensils and bulk food containers designed and constructed to be used once and discarded.

"Single-use articles" includes items such as wax paper, butcher paper, plastic wrap, formed aluminum food containers, jars, plastic tubs or buckets, bread wrappers, pickle barrels, ketchup bottles, and number 10 cans which do not meet the materials, durability, strength, and cleanability specifications.

"Slacking" means the process of moderating the temperature of a food such as allowing a food to gradually increase from a temperature of -23°C (-10°F) to -4°C (25°F) in preparation for deep-fat frying or to facilitate even heat penetration during the cooking of previously block-frozen food such as spinach.

"Smooth" means:

- (a) A food-contact surface having a surface free of pits and inclusions with a cleanability equal to or exceeding that of (100 grit) number 3 stainless steel;
- (b) A nonfood-contact surface of equipment having a surface equal to that of commercial grade hot-rolled steel free of visible scale; and
- (c) A floor, wall, or ceiling having an even or level surface with no roughness or projections that render it difficult to clean.

"Table-mounted equipment" means equipment that is not portable and is designed to be mounted off the floor on a table, counter, or shelf.

"Tableware" means eating, drinking, and serving utensils for table use such as flatware including forks, knives, and spoons; hollowware including bowls, cups, serving dishes, and tumblers; and plates.

"Temperature measuring device or TMD" means a thermometer, thermocouple, thermistor, or other device that indicates the temperature of food, air, or water.

"USDA" means the U.S. Department of Agriculture.

"Utensil" means a food-contact implement or container used in the storage, preparation, transportation, dispensing, sale, or service of food, such as kitchenware or tableware that is multiuse, single-service, or single-use; gloves used in contact with food; food temperature measuring devices; and probe-type price or identification tags used in contact with food.

"Warewashing" means the cleaning and sanitizing of utensils and food-contact surfaces of equipment.

"Whole-muscle, intact beef" means whole muscle beef that is not injected, mechanically tenderized, reconstructed, or scored and marinated, from which beef steaks may be cut.

Integrated Pest Management

"Integrated Pest Management (IPM)" means a documented organized system of controlling pests through a combination of methods including inspection, baits, traps, effective sanitation and maintenance and judicious use of chemical compounds.

Child-Activity Centers

"Child-activity center" means facilities for child-related activities where children under 6-years old are placed to be cared for by vessel staff.

Administrative Guidelines

"Critical item" means a provision of these guidelines that, if in noncompliance, is more likely than other deficiencies to contribute to food or water contamination, illness, or environmental health hazard.

"Critical item" is an item that is denoted in these guidelines with a "C" to the left of the section number which is also highlighted in red.

"Variance" means a written document issued by the Vessel Sanitation Program that authorizes a modification or waiver of one or more

requirements of these guidelines if, in the opinion of the Vessel Sanitation Program, a health hazard or nuisance will not result from the modification or waiver.

2.0 **Health Onboard Attestation**

2.100 **References**

2.100.1 *This manual incorporate the technical text in full of the “Vessel Sanitation Program Operations Manual” edition August 2005 from U.S Centers for Disease Control and Prevention. This text is printed in regular Roman characters, and numbering follows the one of the original VSP operations Manual.*

2.100.2 *Bureau Veritas requirements, additional to the provisions of the VSP Operations Manual, are printed in italics as used for this item 2.100.2. Chapters or paragraphs corresponding to these additional requirements are inserted in the original text of the VSP Operations Manual, and numbered with “100”, “200” etc as appropriate.*

2.200 **Health Onboard Attestation**

2.200.1 *The Health Onboard attestation is delivered after successful completion of initial audit as described herebelow, to ships complying with the requirements of this Manual.*

2.200.2 *This attestation will reflect that the condition of the vessel, as well as enforced procedures including periodical and corrective maintenance, are in conformity with well established hygiene standards, and that an efficient policy of control and limitation of risks of contamination has been implemented and in force.*

2.200.3 *The validity of such attestation will be of one year starting from the date of completion of the initial audit, and will be renewed subject to successful results of annual renewal audit.*

2.200.4 *An example of attestation is shown in annex 1*

2.300 **Audit procedures**

2.300.1 *The following general definitions are used in this manual:*

- *Operator means the Owner of the vessel or any other organization or person, such as the Manager, or the Shipyard, or the Bareboat Charterer, who declares to be in charge of the operation and maintenance of the ship.*
- *The Society means Bureau Veritas*
- *Surveyor and Auditor mean technical staff acting on behalf of the Society to perform inspection in relation to this manual.*

2.300.2 *The procedure for issuance of Health Onboard attestation is the following:*

- 2.300.2.1 - *a request for audit with respect to issuance of Health Onboard attestation is to be sent to the Society, signed by the Operator in charge of the concerned vessel.*
- 2.300.2.2 - *For preparation of the initial audit the following documents are to be submitted by the Operator to the Society:*
 - *General arrangement drawing of the vessel.*
 - *Plans and documents necessary to carry out an evaluation of the survey extend of the air and water networks.*
 - *Lay-out drawings for the galleys and main pantries.*
- 2.300.2.3 - *For preparation of the periodical renewal audit the following documents are to be submitted by the Operator to the Society by the Interested Party:*
 - *Information on any modification on air & water networks, as well as on food processing with respect to arrangement of galleys or pantries facility on board, since the last audit.*
- 2.300.2.4 - *An audit plan will be prepared by the Society and submitted to the Operator for preparation of the audit.*
- 2.300.2.5 - *During initial and periodical audit the auditor of the Society will review the condition of the vessel as well as the implementation of the concerned procedures with respect to the content of this manual.*
- 2.300.2.6 - *Auditor is to be given free access to ships facilities as deem necessary for the proper completion of the job assigned. The auditor is to be constantly accompanied during his inspections by personnel of the vessel's operator.*
- 2.300.2.7 - *The results of the audit will be explained to the master and the concerned staff on board by the auditor before leaving the vessel.*
- 2.300.2.8 - *A copy of the draft inspection report will be left with the master. The report will be reviewed in detail and opportunity provided for discussions of the findings.*
- 2.300.2.9 - *The complete report will consist of 3 documents:*
 - *Rating report with respect to USPHS items only, for operator information.*
 - *Rating report with respect to USPHS and supplementary BV items.*
 - *Audit report with details on all findings (observations and non-conformities) observed during the audit. When deemed necessary or appropriate, the report is to be supplemented by documents, sketches or photographs taken by the auditor during the audit.*
- 2.300.2.10 *Models of reports are given in annex 2.*

3.0 Risk Management

3.100 Management responsibility

3.100.1 Water, air and food safety Policy

3.100.1.1 *the management shall communicate information concerning development, implementation and updating of the water, air and food safety management system throughout the organization to the extent necessary to ensure water, air and food safety as required by this manual.*

3.100.1.2 *the management shall evaluate periodically, and update when necessary, the water, air and food safety management system to ensure that the system reflects the organization's activities and incorporates the most recent information on the water, air and food safety hazards subject to control.*

3.100.2 Top management duty

3.100.2.1 *a) Top management shall ensure that the food safety policy is related to the organization's role in the food chain,*

3.100.2.2 *b) Ensure that the water, air and food safety policy is in compliance with both the mutually agreed water, air and food safety requirements of customers and with regulatory requirements*

3.100.2.3 *c) Ensure that the water, air and food safety policy is communicated, implemented and maintained at all levels of the organization and is reviewed for continued suitability*

3.100.3 Water, air and food safety management system planning

3.100.3.1 *Top management shall ensure that*

3.100.3.1.1 *a) planning of the water, air and food safety management system is carried out to meet requirements as well as the objectives of the organization that support water, air and food safety, and*

3.100.3.1.2 *b) the integrity of the water, air and food safety management system is maintained when changes to the water, air and food safety management system are planned and implemented.*

3.100.3.2 *Safety team leaders*

3.100.3.2.1 *Top management shall appoint safety team leaders for water, air and food who, irrespective of other responsibilities, shall organize the work of safety teams and have the responsibility and authority to*

3.100.3.2.1.1 *a) report directly to the organization's top management on the effectiveness and suitability of the water, air and food safety management systems for review as a basis for improvement of the systems, and*

3.100.3.2.1.2 *b) arrange relevant training and education of the water, air and food safety team members*

3.100.4 Management review

3.100.4.1 *Top management shall review the water, air and food safety management system organization at planned intervals to ensure their continuing suitability, adequacy and effectiveness. The management review process shall ensure that the necessary information is collected and made available to allow top management to carry out these evaluations.*

3.200 Documentation

3.200.1 *Records shall be established and maintained to provide evidence of conformity to requirements and of the effective operation of the water, air and food safety management systems. Records shall remain legible, readily identifiable and retrievable.*

3.200.2 *Documented procedures shall be established to define the controls needed for the correction, identification, storage, protection, retrieval, retention time and disposition of records.*

3.300 Prerequisite Programms (PRP)

3.300.1 *The organization shall establish, implement and maintain PRP(s) to assist in the following:*

3.300.1.1 *a) controlling the likelihood of introducing water and air safety hazards to the water and air production and distribution systems through the work environment;*

3.300.1.2 *b) controlling the likelihood of introducing food safety hazards to the product through the work environment;*

3.300.1.3 *b) controlling biological, chemical and physical contamination of the water and the air, including cross contamination*

3.300.1.4 *b) controlling biological, chemical and physical contamination of the food product(s) including cross contamination*

3.300.1.5 *c) controlling water and air safety hazard(s) levels in the production and distribution systems. The PRP(s) shall be appropriate to the organizational needs with regard to water and air safety, be approved by the water and air safety teams, and their relevance and appropriateness for controlling water and air safety hazards shall be included in the hazard analysis*

3.300.1.6 *c) controlling food safety hazard(s) levels in the product and product processing environment. The PRP(s) shall be appropriate to the organizational needs with regard to food safety, be approved by the food safety team, and their relevance and appropriateness for controlling food safety hazards shall be included in the hazard analysis*

3.400 Hazard analysis

3.400.1 *An HACCP plan should be established*

3.400.2 *The HACCP plan is a controlled document and shall include the following information:*

3.400.2.1 *- the hazards to be controlled by the HACCP plan*

3.400.2.2 *- the CCPs where the identified hazards will be controlled*

3.400.2.3 *- critical limits for each hazard at each CCP*

3.400.2.4 *- monitoring procedures for each hazard at each CCP*

3.400.2.5 *- actions to be taken if critical limits are exceeded*

3.400.2.6 *- the individual(s) responsible for performing each monitoring procedure;*

3.400.2.7 *- where the results of the monitoring are recorded.*

3.500 Monitoring / validation and improvement of the water, air and food safety management systems

3.500.1 *The organization shall determine suitable methods for the monitoring and measurement. When it has been determined that monitoring and measurement devices are needed, the organization shall provide evidence that the devices*

are adequate to ensure the performance of the water, air and food safety management system.

3.500.2 *The organization shall establish the processes needed to ensure that monitoring and measurement are carried out in a manner that is consistent with the specified requirements.*

3.500.3 *Food safety management system verification*

3.500.3.1 *The organization shall conduct internal audits at planned intervals to determine whether the water, air and food safety management system*

3.500.3.1.1 *- conforms to the planned arrangements, to the requirements of this International Standard and to the water, air and food safety management system requirements established by the organization, and*

3.500.3.1.2 *- is effectively implemented and updated.*

3.500.3.2 *An audit program shall be planned yearly*

3.500.3.3 *The management responsible for the area being audited shall ensure that actions are taken without undue delay to eliminate detected nonconformities and their causes.*

3.500.3.4 *Follow-up activities shall include the verification of the actions taken and the reporting of the verification results.*

3.500.3.5 *Results of audits shall in relevant form be reported to top management as part of the analysis of results of verification activities*

3.500.4 *Analysis of results of verification activities*

3.500.4.1 *The water, air and food safety team shall analyze the results of verification activities, including the results of the internal audits. The analysis shall be carried out in order to*

3.500.4.2 *- confirm that the overall performance of the system meets the planned arrangements, meets the requirements of International Standard*

3.500.4.3 *- identify the need for updating or improvement of the water, air and food safety management systems*

3.500.4.4 *- provide evidence that corrective actions and corrections that have been taken are effective*

4.0 Gastrointestinal Illness Surveillance

4.1 Data Collection

4.1.1 Reportable Cases

4.1.1.1 Definition

4.1.1.1.1 A reportable case of gastrointestinal illness shall be defined as:

- (1) Diarrhea (three or more episodes of loose stools in a 24 hour period); or
- (2) Vomiting and one additional symptom including one or more episodes of loose stools in a 24-hour period, or abdominal cramps, or headache, or muscle aches, or fever (temperature $>38^{\circ}\text{C}$ or 100.4°F) and
- (3) Reported to the master of the vessel, the medical staff, or other designated staff by a passenger or a crew member. Documentation of the 3 day assessment for each crew member WITH SYMPTOMS shall be maintained on the vessel and be available for review during inspections
- (4) Nausea, although a common symptom of gastrointestinal illness, is specifically excluded from this definition to avoid mis-classifying seasickness (nausea and vomiting) as gastroenteritis.

4.1.1.1.2 The reportable cases shall include those crew members with a symptom onset time of up to 3 days before boarding the vessel.

4.1.1.1.3 These case definitions are to be used for identifying and classifying cases, both of which are done for reporting purposes. They should not be used as criteria for clinical intervention or public health action. For many conditions of public health importance, action to contain disease should be initiated as soon as a problem is identified; in many circumstances, appropriate public health action should be undertaken even though insufficient information is available to determine whether cases meet the case definition. Nausea, although a common symptom of gastrointestinal illness, is excluded to avoid classifying seasickness (nausea and vomiting) as a gastrointestinal illness.

4.1.1.1.4 Foreign quarantine regulations require death and certain illnesses of an arriving international passengers or crew members to be reported to the quarantine station having responsibility for the port of entry. More information can be obtained from: Division of Global Migration and Quarantine, 1600 Clifton Road, MS E-03, Atlanta, GA 30333 USA, telephone (404) 498-1600, fax (404) 498-1633.

4.1.2 Records

4.1.2.1 Log

4.1.2.1.1 A standardized gastrointestinal illness surveillance log for each cruise shall be maintained daily by the master of the vessel, the medical staff, or other designated staff.

4.1.2.1.2 The gastrointestinal illness surveillance log shall list the name of the vessel, the cruise dates and the cruise number.

4.1.2.1.3 The log shall list:

- (1) All reportable cases of gastrointestinal illness;

(2) All passengers and crew members who are dispensed antidiarrheal medication from the master of the vessel, the medical staff, or other designated staff.

4.1.2.1.4 The gastrointestinal illness surveillance log entry for each passenger or crew member shall contain the following information:

- (1) The first date of clinic visit or report to staff of illness;
- (2)- The person's name, age and gender;
- (3)- A designation as passenger or crew member;
- (4)- Crew member position or job on the vessel, if applicable;
- (5) Cabin number;
- (6) Meal seating information;
- (7) Date and time of illness onset;
- (8) Illness symptoms, including the presence of the following selected signs and symptoms: numbers of episodes each of diarrhea and vomiting per day, bloody stools, fever, recorded temperature, abdominal cramps, headaches and muscle ache
- (9) Notation on whether or not a stool specimen was requested and received;
- (10) Use of antidiarrheal medication; and
- (11) The presence of underlying medical conditions which may affect interpretation of acute gastrointestinal illness for example diabetic diarrhea, inflammatory bowel disease, gastrectomy or others.

4.1.2.1.5 Antidiarrheal medications shall not be sold or dispensed to passengers or crew except by designated medical staff. A yes/no entry for antidiarrheal medications sold or dispensed at medical will be recorded on the gastrointestinal illness surveillance log form.

4.1.2.2 Questionnaires

4.1.2.2.1 Questionnaires detailing activities and meal locations for the 72 hours before illness onset shall be distributed to all passengers and crew members who are gastrointestinal illness cases. The self-administered questionnaires shall contain all of the data elements that appear in the questionnaire found in Annex 13.2. The completed questionnaires shall be maintained alongside the gastrointestinal illness surveillance log.

4.1.2.3 Retention

4.1.2.3.1 The medical log, gastrointestinal illness log, the daily inventory of antidiarrheal medication sales, and the 72 hour self-administered questionnaires shall be maintained on the vessel for 12 months. Electronic records of these documents are acceptable as long as the data are complete and can be retrieved during inspections and outbreak investigations. Retention of a paper record or crew medical log for crew members with symptoms up to 3 days prior to boarding the vessel is acceptable and shall be maintained on the vessel for 12 months.

4.1.2.3.2 The gastrointestinal illness surveillance log, the daily inventory of antidiarrheal medication sales and the 72 hour self-administered questionnaires shall be available for review by the VSP during inspections and outbreak investigations. These materials shall be transmitted by facsimile to the VSP for review in outbreak investigations, as requested.

4.1.2.4 Confidentiality

4.1.2.4.1 All personal medical information received by CDC personnel shall be protected in accordance with applicable federal law, including 5 U.S.C. Section 552a. Privacy Act - Records maintained on individuals and the

Freedom of Information Act. 5 U.S.C. Section 552. Administrative Procedure - Public information; agency rules, opinions, orders, records, and proceedings.

4.2 Notification

4.2.1 Routine Report

4.2.1.1 Routine Report Timing

4.2.1.1.1 The master, the medical staff, or other designated staff of a vessel destined for a U.S. port from a foreign port shall submit at least one standardized gastrointestinal illness report based on the number of reportable cases in the gastrointestinal illness log to the VSP no less than 24 hours, but not more than 36 hours before the vessel's expected arrival at the U.S. port.

4.2.1.1.2 If the number of cases changes after submission of the initial report, an updated report shall be submitted no less than 4 hours before the vessel's arrival at the U.S. port. The 4-hour update report shall be a cumulative total count of the reported crew and passengers during the entire cruise, including the additional cases.

4.2.1.2 Report Contents

4.2.1.2.1 The gastrointestinal illness report shall contain:

- (1) The name of the vessel;
- (2) The ports of embarkation and disembarkation
- (3) The dates of embarkation and disembarkation;
- (4) The total numbers of reportable cases of gastrointestinal illness among passengers and crew members, including those who have been disembarked or removed because of illness, even if the number is 0; and
- (5) The total number of passengers and crew members on the cruise.

4.2.1.2.2 For cruises lasting longer than 15 days prior to entering a U. S. port, the gastrointestinal illness report may include only those reportable cases and total numbers of passengers and crew members for the 15 days prior to the expected arrival at a U. S. port.

4.2.2 Special Report

4.2.2.1 Special Report Timing

4.2.2.1.1 The master, or designated corporate representative, of a vessel with an international itinerary destined for a U.S. port shall submit a special report at any time during a cruise, including between two U.S. ports, when:

- (1) The cumulative percentage of reportable cases entered in the gastrointestinal illness surveillance log, reaches 2% among passengers or 2% among crew; and the vessel is within 15 days of expected arrival at a U.S. port

4.2.2.1.2 Daily reports of illness status shall be submitted as requested by the VSP following the initial submission of a special report.

4.2.2.1.3 Routine 24-hours before arrival and 4-hours before arrival reports shall continue to be submitted by the master, or designated corporate representative, of a vessel that has submitted a special report.

4.2.2.2 Special Notification

4.2.2.2.1 A telephone notification to the VSP shall accompany a special 2% report.

4.2.3 Report Retention

4.2.3.1 Retention