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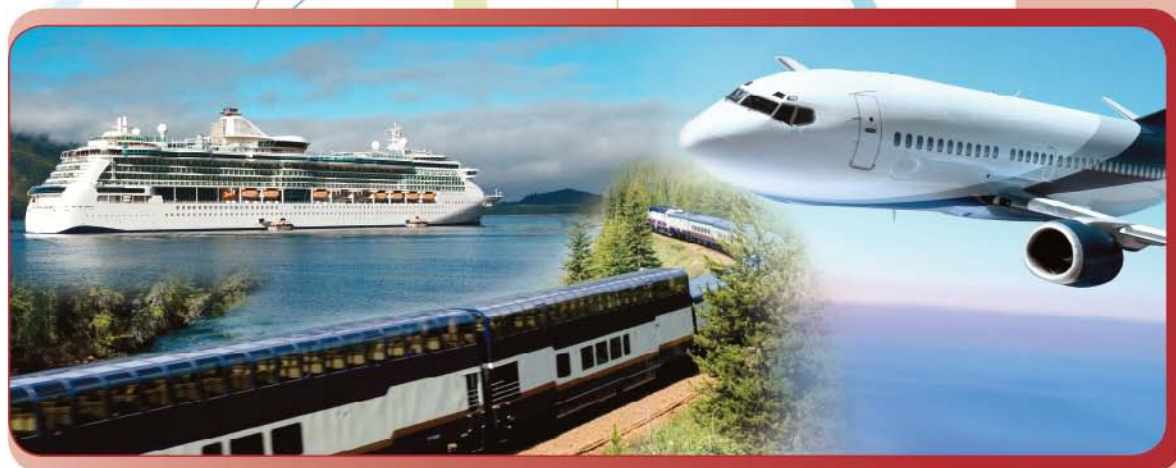
Santé
Canada

*Your health and
safety... our priority.*

*Votre santé et votre
sécurité... notre priorité.*

Cruise Ship Inspection Program

Operations Manual



*Travelling Public Program/
Le Programme du public voyageur*

Canada

Health Canada is the federal department responsible for helping the people of Canada maintain and improve their health. We assess the safety of drugs and many consumer products, help improve the safety of food, and provide information to Canadians to help them make healthy decisions. We provide health services to First Nations people and to Inuit communities. We work with the provinces to ensure our health care system serves the needs of Canadians.

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Cruise Ship Inspection Program Operation Manual

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1.0 PURPOSE

Health Canada's Cruise Ship Operational Manual (2012) includes information on Health Canada's Travelling Public Program and revised inspection guidelines (**Annex 5**) for cruise ships that ensure continued harmonization with the United States – Centers for Disease Control and Prevention (US CDC), Vessel Sanitation Program Operations Manual (2011). Health Canada's Cruise Ship Operations Manual (2012) will be in effect April 2012 until further notice. An electronic copy of this manual can be obtained upon request by contacting: phb_bsp@hc-sc.gc.ca.

2.0 MANDATE AND GOAL

Health Canada has a mandate under the *Department of Health Act*, Section 4, to take measures relating to the promotion and preservation of the health of the people of Canada. Under Section 4(2 (e)) the Minister's powers, duties and functions include more particularly "*the protection of public health on railways, ships, aircraft and all other methods of transportation, and their ancillary services*".

The main goal of the Travelling Public Program is to protect the health of the travelling public by ensuring the provision of safe food, water, and other environmental health conditions. This is accomplished through an inspection and audit program, based on inspection guides developed in collaboration with the relevant conveyance sector or industry. The inspection guides incorporate standards from other domestic legislation and/or national or international quality assurance standards where possible.

The Travelling Public Program encompasses passenger conveyances and ancillary services within federal jurisdiction. Conveyance sectors include airlines, passenger rail, marine (ferries, cruise ships and charter vessels) and passenger motor coaches. Ancillary services include operations that are vital to the operation of the passenger conveyance and include: flight kitchens/food caterers, terminal operations including potable water systems and sanitation.

3.0 HEALTH CANADA'S NEW RISK-BASED APPROACH

On April 1, 2011, the Travelling Public Program implemented a risk-based approach to public health protection on conveyances. The key component of the new approach is that Health Canada will target departmental efforts at areas that are deemed to be the highest potential public health risk to Canadians and visitors travelling in Canada. With the implementation of the new risk-based approach, Health Canada ceased charging fees for inspections and audits, which enables the department to work with conveyance sectors who did not participate in our former program.

The Travelling Public Program will continue to provide the World Health Organization (WHO) International Health Regulations (IHR) Ship Sanitation Certification program (under cost recovery) but it is not specifically addressed in this manual.

4.0 RISK-BASED APPROACH TO DECISION-MAKING

As part of the transition to a risk-based approach, the Travelling Public Program is expanding the type and number of tools that will be available to industry partners, including outreach programs to supplement the inspection/audit protocols currently in use. Which activities that Health Canada will undertake, as well as the frequency of these activities, will be determined by their potential risk.

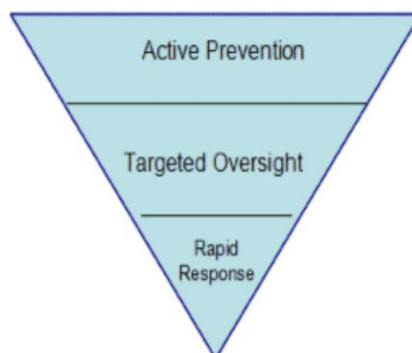


Figure 1 – The Three Pillars in Risk-Based Approach

The three pillars presented in Figure 1 reflect the relevant resources that should be applied to the program, with greatest resources spent on active prevention and targeted oversight. If prevention and oversight are successful, fewer resources will be required to respond to emergencies and outbreaks.

1. Active Prevention Pillar – outreach to support development of management plans, training (food safety, potable water), and health promotion activities related to gastrointestinal illnesses.
2. Targeted Oversight – type and frequency of inspections and audits of conveyance sectors and/or companies to be informed by risk.
3. Rapid Response – complaints and gastrointestinal illness (GI) investigations will support the public health network in Canada and internationally.

Health Canada will incorporate a risk assessment process to determine the most appropriate tools and resources to be used in each conveyance sector.

5.0 HEALTH CANADA'S CRUISE SHIP INSPECTION PROGRAM

Health Canada's Cruise Ship Inspection Program (CSIP) has been harmonized where possible with the United States Centers for Disease Control and Prevention, Vessel Sanitation Program (CDC/VSP). In keeping with the harmonization process, Health Canada's CSIP, has adopted the US CDC/VSP Operations Manual (2011) as the criteria for conducting and scoring inspections.

a. Inspection and Audits Protocols

i. *Inspections and Audits*

Inspections and audits will be unannounced. Inspections and audits will no longer be scored with the exception of comprehensive cruise ship inspections, due to harmonization with the US CDC/VSP. A report outlining the areas that did not meet the standards will be provided to the operator (see Inspection Reports in Section 6.0). Annex 1 includes Health Canada's Cruise Ship Inspection Form that will be used when conducting cruise ship inspections/audits.

Re-inspections/audits of deficiencies may be conducted to determine if the sanitary condition of a conveyance facility has improved or not following a substandard periodic inspection. The re-inspection/audit will be conducted as soon as possible and generally will be limited to audit/inspection of deficiencies or critical violations identified during the initial inspection. A report outlining the areas assessed will be provided to the operator.

ii. *Critical Violations*

The inspection guides for each conveyance or ancillary service outlines non-critical and critical requirements. The items noted with an asterisk (*) are **critical requirements** as these are items considered to be *essential* to ensuring potable water, food safety and effective sanitation or are more likely than other deficiencies to contribute to increased public health risk. All critical deficiencies are to be corrected and noted in a "Corrective Action Statement" to be submitted within ten (10) business days from the date of the audit/inspection. However, Health Canada encourages submission of the actions taken to address non-critical deficiencies as well. Please refer to Section 6 b. "Corrective Action Statement".

iii. *Imminent Health Hazards*

Imminent health hazards are conditions that severely impact the ability of a conveyance or ancillary service facility to operate in a safe manner. Examples of conditions that may pose an imminent health hazard include, but are not limited to: fire, flood, extended interruption of electrical service or water service, sewage back-up or break, contaminated potable water supply, heavy pest infestation, gross insanitary conditions, poor food handling practices that are likely to lead to a foodborne illness outbreak and an epidemiologically linked foodborne illness outbreak.

If an imminent health hazard is identified during an inspection or investigation, the Environmental Health Officer will immediately document the conditions and inform the operator of the findings. The Environmental Health Officer will also notify the appropriate Health Canada Regional Manager who will determine required follow up actions that may include a written notice to cease operations until the imminent health hazard has been corrected. Authorities derived from the *Quarantine Act* (2005) support Health Canada to take measures to protect public health if imminent health hazards are identified.

iv. Food, Water, Ice and Environmental Sampling

The Environmental Health Officer may at times collect food, water, ice and environmental surface samples as part of their assessment. The laboratory results will be shared with the conveyance or ancillary service operator.

As part of a routine inspection that includes assessment of the potable water system, the Environmental Health Officer will collect water samples for microbiological analysis. Water samples may be collected from multiple points within the conveyance or ancillary services potable water distribution system, including:

- Main water supply;
- Water point or equipment used for transfer to a conveyance;
- Galley;
- Lavatory.

The standards for potable water are set out in the most current version of the *Guidelines for Canadian Potable Water Quality*¹ including the maximum acceptable concentration of bacteria in water.

If a cruise ship operation has conducted baseline assessments of the physical, chemical and radiological parameters of their water supply, the results of the baseline analysis should be compared to the relevant sections of the *Guidelines*.

b. Gastrointestinal Illness (GI) Surveillance¹

i. Reporting

The information contained in Annex 2 describes requirements for reporting GI surveillance data, as well as the steps to access the Health Canada GI Reporting System.

¹ http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/2010-sum_guide-res_recom/index-eng.php

¹ US CDC/VSP Operations Manual (2011) uses the term acute gastroenteritis (AGE) to describe gastrointestinal illness (GI). Health Canada will continue to use the term GI. A case of AGE is equivalent to a case of GI.

ii. Data Collection

Disease surveillance should be directed toward maintaining a complete and accurate count of cases of GI on board the ship. A standardized GI Surveillance Log as well as questionnaires detailing activities and meal locations provides a means to collect surveillance data for each cruise. Sample data collection forms are available in Annex 3.

c. Investigations

i. Overview

An investigation may be triggered by a public complaint, a report of increased incidence of gastrointestinal illness, or a confirmed case or an outbreak linked to a conveyance/facility.

The reports of illness may be received from an individual, a regional health authority, a federal agency or from an international source.

ii. Complaint Investigations

All complaints will be recorded and where possible, followed up by the Environmental Health Officer to determine its validity and any required action. All complaints will be documented.

iii. Gastrointestinal Illness Investigations

An investigation may be triggered by a report of an increased incidence of gastrointestinal illness, a confirmed case or suspected outbreak with cases exhibiting unusual or severe gastrointestinal symptoms. GI investigations include information gathering, sampling and environmental evaluations.

An investigation will likely involve collaboration with other provincial, federal or international public health agencies. All investigations will be documented and a final report will be shared with the conveyance operator and any related stakeholders. Any files containing personal health information are subject to the *Privacy Act* and will be handled and stored accordingly.

6.0 INSPECTION REPORTS and CORRECTIVE ACTIONS

a. Inspection Reports

a. Health Canada Environmental Health Officers will review findings verbally, at a minimum, with conveyance and ancillary service operators, to ensure common understanding of deficiencies identified and reasons for specific corrective actions to be taken within specified timeframes. If feasible, a draft report will be left with the conveyance operator at the time of inspection.

A final written Inspection Report will be issued following an internal review within five (5) days of inspection identifying deficiencies and required corrective action, including timeframes to achieve compliance

b. Corrective Action Statements

Operators are requested to provide Health Canada with a "Corrective Action Statement" which details each deficiency identified during the audit/inspection, corrective action taken, and standard operating procedure (s) implemented to prevent the recurrence of the deficiency (ies). A "Corrective Action Statement" will be submitted whenever a critical deficiency has been identified. However, Health Canada encourages submission of the status of addressing non-critical deficiencies as well.

A "Corrective Action Statement" will be sent to the attention of the appropriate Health Canada Regional Manager within ten (10) business days of the audit/inspection. The "Corrective Action Statement" can be submitted by Fax or Email. The contact information for the different regions across the country is provided in Table 1.

Table 1: Regional Contacts for Corrective Action Statement

Region	Fax Number	Email Address
Eastern (NS, NB, NFLD, PEI, NU)	(506) 855-6568	Atl.phb@hc-sc.gc.ca
Central (ON, QC, MB, NT)	(514) 283-4317	Que.Ont.Mb.bsp.phb@hc-sc.gc.ca
Western (BC, AB, SK, YT)	(604) 666-7487	Western.Region.CARs@hc-sc.gc.ca

A sample "Corrective Action Statement" can be found in Annex 4.

c. Follow-up Actions Health Canada May Take

The Environmental Health Officer may conduct a re-inspection in the event a "Corrective Action Statement" is not forthcoming or if corrective action is inadequate to satisfy the concerns that public health risks have been mitigated.

The *Quarantine Act* (2005) provides additional authority to address environmental health risks on conveyances upon arrival or departure from Canada. The *Act* allows an Environmental Health Officer to take measures under section 39 (1) if he has reasonable grounds to believe that a conveyance which is in the process of departing from Canada could be a source of a communicable disease. The Environmental Health Officer can take any of the measures listed under section 39 including ordering the ship to be disinfected, disinfected, decontaminated or fumigated. Failure to comply with an order under section 39(1) is an offence under section 69 of the *Act* and may be subject to a fine of up to \$75,000 or imprisonment of up to six months or both.

ANNEX 1

CRUISE SHIP INSPECTION FORM

Only full comprehensive cruise ship inspections will be scored due to harmonization with the US Vessel Sanitation Program (VSP). Partial inspections focusing on assessment of specific risk areas will not be scored. Health Canada's inspection report and scoring system is based on inspection items with a total value of 100 points. Inspection items are weighted according to their probability of increasing the risk for a gastrointestinal illness outbreak. Critical items are those with a weight of 3 to 5 credit point values on the inspection report. Critical items are indicated with bold lettering designated in the US Vessel Sanitation Program Operations Manual (2011). Non-critical items are those with a weight of 1 to 2 credit point values on the inspection report. Each deficiency found on an inspection shall be deducted from 100 possible points.

Health Canada – Cruise Ship Inspection Form

Vessel Name		Inspection Date		Port	Results Presented to	Score:
Cruise Line		No. Pax	No. Crew	Inspection Type	Inspected by	

Item No. / Point Value / Description Bold = Critical Item		
DISEASE REPORTING		
01	4	Disease reporting
02	1	Medical logs maintenance
POTABLE WATER		
03	5	Boiler / production source; Halogen residual
04	5	Distribution system halogen residual
05	2	Distribution system halogen analyzer calibrated
06	2	Halogen analyzer chart recorder maintenance, operation, records; Micro sampling records
07	3	System protection cross-connections, backflow; Disinfection
08	1	Filling hoses, caps, connections, procedures; Sample records, valves; System construction, maintenance
SWIMMING POOLS, SPAS		
09	3	Swimming pools / spas halogen residuals
10	2	Swimming pools / spas maintenance, safety equipment
FOOD SAFETY		
PERSONNEL		
11	5	Food handlers infections, communicable diseases
12	4	Hands washed; Hygienic practices
13	3	Management, knowledge, monitoring
14	1	Outer clothing clean; Jewelry, hair, hand sanitizers
FOOD		
15	5	Food source, sound condition; Food re-service
16	5	Potentially hazardous food temperatures
17	2	Temperature practices; Thawing
18	3	Cross-contamination
19	2	Food protection; Original containers; labeling; In-use food dispensing, preparation utensils
MEDICAL LOG REVIEW		
Cruise – Start / End / Port / PAX / ILL / CREW / ILL		
1.		
2.		
3.		
4.		
5.		

Item No. / Point Value / Description Bold = Critical Item		
EQUIPMENT		
20	2	PHF temperature maintenance facilities; Food-contact surfaces; Food TMD's
21	1	Nonfood-contact surfaces; Ambient TMD's
22	2	Warewashing facilities; TMD's; Test kits
23	2	Pre-wash; Wash and rinse solutions
24	3	Sanitizing rinse
25	1	Wiping cloths / chef's towels
26	3	Food-contact surfaces equipment / utensils clean; Safe materials
27	1	Non-food contact surfaces equipment / utensils clean
28	2	Equipment / utensil / linen / single / service storage handling dispensing; Cleaning frequency
TOILET AND HANDWASHING FACILITIES		
29	3	Facilities convenient, accessible, design, installation
30	1	Hand cleanser, sanitary towels, waste receptacles. Handwashing signs; Maintenance
TOXIC SUBSTANCES		
31	3	Toxic Items
FACILITIES		
32	1	Solid waste containers
33	1	Docks / bulkheads / dockheads
34	1	Plumbing fixtures / supply lines / drain lines / drains
35	2	Liquid waste disposal
36	1	Lighting
37	1	Rooms / equipment venting
38	1	Unnecessary articles, cleaning equipment; Unauthorized personnel
ENVIRONMENTAL HEALTH		
39	3	IPM program effective; Approved pesticide application
40	1	IPM procedures; Outer openings protection
41	2	Housekeeping
42	1	Child activity centers
43	1	Ventilation
KNOWLEDGE		
44	2	Person in charge, Knowledge

NAME OF VESSEL: _____ **INSPECTION DATE:** _____ **Month / Day / Year**
 _____ / _____ / _____

[illegible]

ANNEX 2

GASTROINTESTINAL ILLNESS (GI) SURVEILLANCE SYSTEM - REPORTING FOR CRUISE SHIPS

Routine Report

A standard *GI report* will be submitted to Health Canada **no less than 24 hours, but no more than 36 hours** before the ship's arrival at a Canadian port. The report will contain the name of the vessel, ports and dates of embarkation and disembarkation, the total number of reportable cases (see Health Canada Inspection Guidelines – Section 4.2.1.1.1) of passengers and crew and the total number of passengers and crew.

When a cruise does not originate in Canada, routine reporting is to be submitted prior to arrival at the first Canadian port of call.

When a cruise originates in Canada, routine reporting is to be submitted prior to arrival at the last port of call in Canada.

Four (4) Hour Report

If the number of cases changes after submission of the initial report, an updated report will be submitted no less than four (4) hours before the ship's arrival at the Canadian port.

The four (4) hour update report will be a cumulative total count of the reported crew and passengers during the entire cruise, including the additional cases.

Routine reports and four (4) hour update reports may be made by telephone, facsimile, or preferably electronically. The ship will maintain proof onboard that the report was successfully received by Health Canada.

Special (Immediate) Report

A special report will be submitted immediately by telephone at any time during a cruise, including between two Canadian ports, when:

1. The cumulative percentage of reportable cases entered in the GI log, reaches 2% among passengers OR 2% among crew; and
2. The ship is within 15 days of expected arrival at a Canadian port.

Daily reports of illness status will be submitted as requested by Health Canada following the initial submission of a special report.

Routine reports (24 hours) and 4-hour reports will continue to be submitted by the master, or designated corporate representative, of a ship that has submitted a special report.

Special reports to be reported by telephone: **1-877-742-2538**


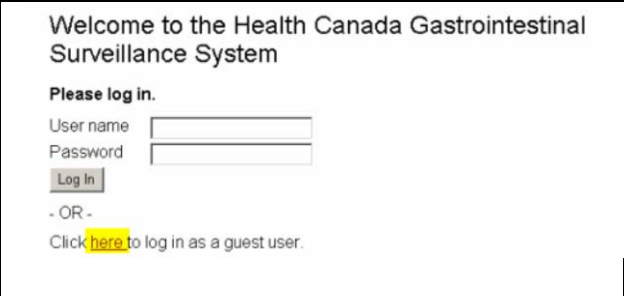
Reporting to Health Canada

The **electronic** version of the GI report can be retrieved and completed by accessing the Health Canada –Gastrointestinal Illness Surveillance System.

The following are the steps for accessing the Health Canada-Gastrointestinal Illness Surveillance System:

- LOG ONTO THE INTERNET: <http://www.healthspace.ca/hcsc>
- Enter your User Name and Password (provided by Health Canada – Travelling Public Program). See screen shot below.

If you **do not** have a user name and password, click on “**guest user**”.

1. You will be required to enter the login and password that has been issued by Health Canada - Travelling Public Program.	
2. If you don't have a login/password or have forgotten your password, then log onto “ Guest User ” and complete the electronic form.	

To request a permanent login/password to the Health Canada Gastrointestinal Illness Surveillance System, please send an email to: phb_bsp@hc-sc.gc.ca

Include the name of the cruise line, vessels associated with this cruise line, name and contact information of person representing the cruise line, etc.

If you do not have access to the internet you can submit your GI report information via facsimile machine to: (613) 960-4540 using the form on page 16.

If there is no access to a facsimile machine, reports may be submitted by telephone by calling the Health Canada - Travelling Public Program - Toll Free line at **1-877-742-2538**. You will then be connected to the Health Canada - Travelling Public Program Duty Public Health Manager.

Gastrointestinal Illness Report

Please ensure that you fill in all the information on this form.

Cruise Line: _____

Vessel name: _____

Captain's name: _____

Ship Phone number: _____

Ship Fax number: _____

Voyage number: _____

Report type: _____

Last port: _____

Next port: _____

Next port E.T.A: _____
 DD/MM/YY *24 hour time*

Embarkation date: DD/MM/YY 24 hour time

Disembarkation date: DD/MM/YY 24 hour time

Total Number of crew on board: _____

Number of crew gastrointestinal cases: _____

Total Number of passengers on board: _____

Number of passengers gastrointestinal cases: _____

Medical contact: _____

Medical contact phone number: _____

Medical contact email address: _____

Your name: _____

Your title: _____

Your email address: _____

ANNEX 3

GASTROINTESTINAL ILLNESS (GI) SURVEILLANCE – DATA COLLECTION FORMS FOR CRUISE SHIPS

The following forms have been adapted from the US VSP Operations Manual (2011) - Annex 13.2 and are provided as guides to standardize the collection of information required to assess the patterns of gastrointestinal illnesses and monitor for outbreaks aboard vessels.

These forms are also downloadable at the CDC/US Vessel Sanitation Program website:

<http://www.cdc.gov/nceh/vsp>

A reportable case of gastrointestinal illness is defined as:

- a) Diarrhea (three or more episodes of loose stools in a 24-hour period or what is above normal for the individual); OR
- b) 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 of $\geq 38^{\circ}\text{C}/100.4^{\circ}\text{F}$); and
- c) Reported to the master of the ship, the medical staff, or other designated staff by a passenger or a crew member.
- d) Nausea, although a common symptom of gastrointestinal illness, is specifically excluded from this definition to avoid misclassifying seasickness (nausea and vomiting) as gastrointestinal illness.

Reportable cases will include those crew members with a symptom onset time of up to three (3) days before boarding the ship. Documentation of the three (3) day assessment for each crew member with symptoms will be maintained on the ship and be available for review during inspections.

Gastrointestinal Illness (GI) Surveillance Log

Vessel Name _____ **Voyage Number** _____ **Dates: From** ____/____/____ **to:** ____/____/____

Total No. of Pax: _____ **Reportable Total No. Of Pax Ill** _____ **Total No. of Crew** _____ **Reportable Total No. of Crew Ill** _____

Note: The Header/Border of the GI Surveillance Log will be completed for EVERY voyage, even if the case counts are zero for both passenger and crew. Even if there is an underlying illness, there may be justification in reporting the patient as reportable. This should be based on sound clinical judgment and based on medical practice. Enter none if there is no underlying illness.

Report to Medical			Last Name,	First Name	Age	Sex	Pax or Crew	Cabin No.	Pax Meal Seat	Crew Position	Illness Onset		Diarrhea Episodes		Vomiting Episodes	Fever		Abdominal Cramps	Headache	Myalgia	Specimen Requested	Specimen Received	Antidiarrheal Medication	Reportable	Underlying Illness (Specify)
Patient ID	Date	Time									Date (mm/dd/yy)	Time (hr/min) (AM/PM)	#	Blood Y/N		#	Y/N								

**Gastrointestinal Illness (GI)
Surveillance Questionnaire**
(To be completed if you have experienced GI Illness)

Vessel Name:	Voyage No:	Date:
Last Name:	First Name:	
Date of Birth (mm/dd/yyyy):	Age:	Sex M/F
Cabin Number:	Total Number Of People in Cabin:	
Dining Seating:	Dining table Number:	
Symptoms Started Date (mm/dd/yyyy):	Time:	AM/PM
Do you know other people ill with the same symptoms?		Yes/No
If yes, please list their names:		
Did you stay overnight or longer in a boarding city before you joined the vessel?		Yes/No
If yes where? City:	Province/State:	Country:
Was the overnight stay in a hotel/motel/commercial residence?		Yes/No
If yes, what was the name and address of the hotel, motel/commercial residence?		
Name:		
Address:		
City:	Province/State:	Country:
How did you travel to the city where you boarded the ship for this cruise? Select all that apply.		
<input type="checkbox"/> Airplane	Airlines:	Flight No:
<input type="checkbox"/> Automobile		
<input type="checkbox"/> Bus/Motorcoach		
<input type="checkbox"/> Train		
<input type="checkbox"/> Other	Please specify:	
Are you a member of a tour group?		Yes/No
Prior to boarding the ship, did you participate in a pre-embarkation tour/package?		Yes/No
If yes, which tour(s)/package(s) did you participate in? (list all)		
Prior to your illness, did you go ashore at any of the ports of call?		Yes/No
If yes, please list the ports of call where you went ashore		
Did you participate in any shore excursions at any port of call?		Yes/No
If yes, which shore excursions did you participate in? (list all)		
Did you eat anything while you were ashore at any port of call?		Yes/No
Did you drink anything (including drinks with ice) while ashore at any port of call?		Yes/No
What did you think is the cause of your illness?		

PLEASE TURN THIS FORM OVER TO PROVIDE FOOD AND SHIPBOARD ACTIVITIES HISTORY

Last Name: _____ First Name: _____

Meals and Activities Aboard Vessel Prior to Illness

Please list the **specific** vessel locations of the meals you consumed and the vessel activities you participated in before you became ill

Day of illness onset Give Date:		Day Before illness onset		Two days before illness onset		Three days before illness onset	
Breakfast		Breakfast		Breakfast		Breakfast	
Place: _____		Place: _____		Place: _____		Place: _____	
Time: _____		Time: _____		Time: _____		Time: _____	
Items eaten/drunk		Items eaten/drunk		Items eaten/drunk		Items eaten/drunk	
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
Lunch		Lunch		Lunch		Lunch	
Place: _____		Place: _____		Place: _____		Place: _____	
Time: _____		Time: _____		Time: _____		Time: _____	
Items eaten/drunk		Items eaten/drunk		Items eaten/drunk		Items eaten/drunk	
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
Dinner		Dinner		Dinner		Dinner	
Place: _____		Place: _____		Place: _____		Place: _____	
Time: _____		Time: _____		Time: _____		Time: _____	
Items eaten/drunk		Items eaten/drunk		Items eaten/drunk		Items eaten/drunk	
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
Snack		Snack		Snack		Snack	
Place: _____		Place: _____		Place: _____		Place: _____	
Time: _____		Time: _____		Time: _____		Time: _____	
Items eaten/drunk		Items eaten/drunk		Items eaten/drunk		Items eaten/drunk	
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
Activities		Activities		Activities		Activities	
AM	PM	AM	PM	AM	PM	AM	PM
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

ANNEX 4

CORRECTIVE ACTION STATEMENT

CORRECTIVE ACTION STATEMENT

The following action has been taken to correct each of the critical deficiencies noted during the inspection/audit conducted on the:

_____ (Name of Conveyance/Facility)
_____ (Date)
at _____ (Place)

Item #	Deficiency	Corrective Action Taken

(Continue until all items to be included in the corrective action statement have been listed.)

Name

Title (Operator/Manager of Conveyance or Facility)

Date

Please send to: **Regional Manager, [REGION]**
 Health Canada

Region	Fax Number	Email Address
Eastern (NS, NB, NFLD, PEI, NU)	(506) 855-6568	Atl.phb@hc-sc.gc.ca
Central (ON, QC, MB, NT)	(514) 283-4317	Que.Ont.Mb.bsp.phb@hc-sc.gc.ca
Western (BC, AB, SK, YT)	(604) 666-7487	Western.Region.CARs@hc-sc.gc.ca

ANNEX 5

HEALTH CANADA CRUISE SHIP INSPECTION GUIDELINES

In keeping with the harmonization process that was established in 1999 between the United States – Centers for Disease Control and Prevention (CDC), Vessel Sanitation Program (CDC/VSP) and Health Canada's Travelling Public Program (HC/TPP), TPP has adopted the CDC/VSP operational guidelines (<http://www.cdc.gov/nceh/vsp>) and technical criteria for cruise ship inspections and made the required jurisdictional changes where necessary. Please note CDC/VSP contains additional administrative references not applicable in Canada.

The Health Canada – Cruise Ship Inspection Guidelines are divided into chapters and sections that focus on operational areas important to safeguarding public health aboard the vessels. The sections of these guidelines correlate to those in the United States VSP Operations Manual (2011).

Green Bold Text

Portions of some sections of these guidelines are written in **green bold**. These provisions are not requirements, but are provided to convey relevant information about specific exceptions and alternative means for compliance. *(Illustrated by using italic lettering)*

Yellow highlighted areas

Yellow highlighted areas identify the changes from the US VSP 2005 Ops Manual to the US VSP 2011 Ops Manual.

Comments regarding the Health Canada Cruise Ship Inspection Program should be directed to: phb_bsp@hc-sc.gc.ca

April 2012

Appreciation is extended to CDC – Vessel Sanitation Program team for their leadership and assistance in the development of the 2011 Operations Manual.

ANNEX 5

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Information to Assist the User on the Manual Format

Organization

The *Cruise Ship Inspection Program – 2011 Operations Manual* is divided into chapters and subsections that focus on each operational area important to safeguarding public health aboard vessels.

Section Number

The international numbering system is used to organize the guidelines in this document.

Keywords

Each of the guidelines is formatted with a title, keyword, or phrase after the section number.

Description

The public health compliance recommendation is provided in this statement.

Green Bold Text

Portions of some sections of these guidelines are written in **green bold**. These provisions are not requirements, but are provided to convey relevant information about specific exceptions and alternative means for compliance. *(illustrated by using italic lettering)*

Inspection Report Number

The individual inspection report item number is shown in parentheses after the section number and keywords; for example, 7.2.4.2.1 Hair Restraints (14).

Critical Items

Critical compliance items are written in **bold red underlined text** in parentheses after the section number and keywords; for example, **7.5.5.1 Food-contact Surfaces (24 C)**. The number in parentheses is the individual inspection report item number.

Noncritical Items

Noncritical compliance items are the other items in this manual.

Yellow highlighted areas

Yellow highlighted areas identify the changes from the US VSP 2005 Ops Manual to the US VSP 2011 Ops Manual.

3.0 Definitions

This section includes the following subsections:

- 3.1 Scope
- 3.2 Definitions
- 3.3 Acronyms

3.1 Scope

The Health Canada *Cruise Ship Inspection Program (CSIP) 2011 Operations Manual* provides definitions to clarify commonly used terminology in this manual. The definition section is organized alphabetically. **Where a definition specifically applies to a section of the manual that will be noted in the definition.**

Terms defined in section 3.2 are identified in the text of these guidelines by **SMALL CAPITAL LETTERS**, or **SMALL CAPS**. For example, section 5.7.1.1.4 states “A CROSS-CONNECTION control program must include at a minimum: ...” CROSS-CONNECTION is in SMALL CAPS and is defined in section 3.2.

3.2 Definitions

Accessible: Exposed for cleaning and inspection with the use of simple tools including a screwdriver, pliers, or wrench. This definition applies to use in FOOD AREAS of the vessel only.

Accredited program: A food protection manager certification program that has been evaluated and listed by an accrediting agency as conforming to national standards for organizations that certify individuals.

An accredited program refers to the certification process and is a designation based on an independent evaluation of factors such as the sponsor's mission; organizational structure; staff resources; revenue sources; policies; public information regarding program scope, eligibility requirements, recertification, discipline and grievance procedures; and test development and administration.

Accredited program does not refer to training functions or educational programs.

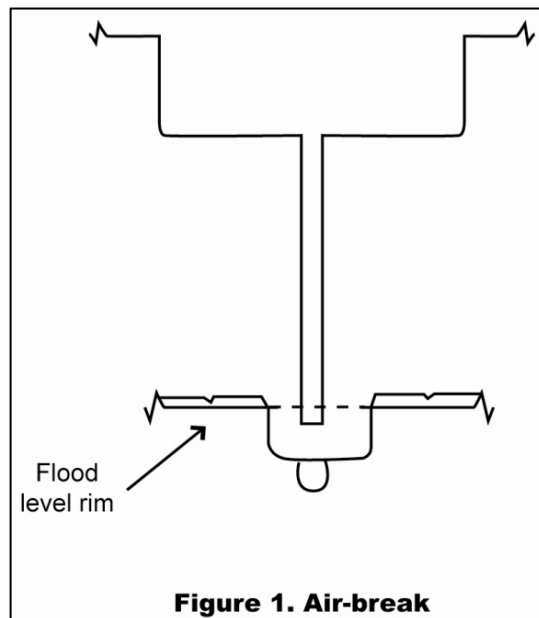
Additive

- (a) **Food additive:** as stated in the Federal Food, Drug, and Cosmetic Act, §201(s) and 21 CFR 170.
- (b) **Color additive:** as stated in the Federal Food, Drug, and Cosmetic Act, §201(t) and 21 CFR 70.

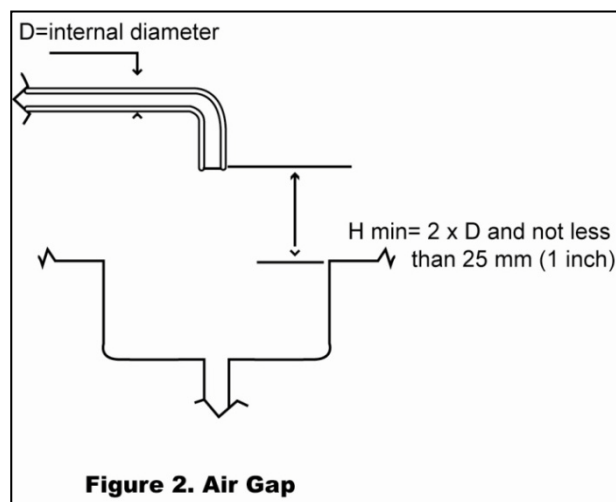
Adequate: Sufficient in number, features, or capacity to accomplish the purpose for which something is intended and to such a degree that there is no unreasonable risk to health or safety.

Adulterated: As stated in the Federal Food, Drug, and Cosmetic Act, §402.

Air-break: 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 (Figure 1).



Air gap (AG): 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 inside diameter of the supply pipe or faucet and not less than 25 millimeters (1 inch) (Figure 2).



Approved: Acceptable based on a determination of conformity with principles, practices, and generally recognized standards that protect public health (e.g., American National Standards Institute [ANSI], National Sanitation Foundation International [NSF International], American Society of Mechanical Engineers [ASME], or American Society of Safety Engineers [ASSE] standards, federal regulations, or equivalent international standards and regulations).

Attack rate: (1) The proportion of individuals exposed to an infectious agent who become clinically ill. (2) The cumulative incidence of infection in a group observed over a period during an epidemic.

Activity pools: Include but are not limited to the following: wave pools, activity pools, catch pools, water slides, INTERACTIVE RECREATIONAL WATER PLAY SYSTEMS,

lazy rivers, action rivers, vortex pools, and continuous surface pools.

Antientanglement cover: A cover for a drain/SUCTION FITTING that is designed to prevent hair from tangling in a drain cover or SUCTION FITTING in a RECREATIONAL WATER FACILITY.

Antientrapment cover: A cover for a drain/SUCTION FITTING that is designed to prevent any portion of the body or hair from becoming lodged or otherwise forced onto a drain cover or SUCTION FITTING in a RECREATIONAL WATER FACILITY.

Atmospheric vacuum breaker (AVB): A BACKFLOW PREVENTION DEVICE that consists of an air inlet valve, a check seat or float valve, and air inlet ports. The device is not APPROVED for use under continuous water pressure and must be installed downstream of the last valve.

a_w (water activity): Measurement of the free moisture content in a food.

Baby-only water facility: RECREATIONAL WATER FACILITY designed for use by children in diapers or who are not completely toilet trained. This facility must have zero water depth. Control measures for this facility would be detailed in a VARIANCE.

Backflow: The reversal of flow of water or other liquids, mixtures, or substances into the distribution pipes of a potable supply of water from any source or sources other than the source of POTABLE WATER supply. BACKSIPHONAGE and BACKPRESSURE are forms of backflow.

Backflow prevention device: An APPROVED backflow prevention plumbing device that must be used on POTABLE WATER distribution lines where there is a direct connection or a potential CROSS-CONNECTION between the POTABLE WATER distribution system and other liquids, mixtures, or substances from any source other than the POTABLE WATER supply. Some devices are designed for use under continuous water pressure, whereas others are noncontinuous pressure types. **VSP /CSIP only accepts vented devices.**

(See also:

ATMOSPHERIC VACUUM BREAKER [AVB].
CONTINUOUS PRESSURE BACKFLOW PREVENTION DEVICE.
DOUBLE CHECK VALVE with intermediate atmospheric vent.
HOSE BIB CONNECTION VACUUM BREAKER.
PRESSURE VACUUM BREAKER ASSEMBLY.
REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY.)

Backpressure: An elevation of pressure in the downstream piping system (by pump, elevation of piping, or steam and/or air pressure) above the supply pressure at the point of consideration that would cause a reversal of normal direction of flow.

Barometric loop: A continuous section of supply piping that rises at least 35 feet above the supply point and returns back down to the supply. Typically the loop will be in the shape of an upside-down "U." A barometric loop only protects against BACKSIPHONAGE because it operates under the principle that a water column cannot rise above 33.9 feet at sea-level pressure.

Backsiphonage: The reversal or 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.

Beverage: A liquid for drinking, including water.

Black water: Wastewater from toilets, urinals, medical sinks, and other similar facilities.

Blast chiller: A unit specifically designed for rapid intermediate cooling of food products from 57°C (135°F) to 21°C (70°F) within 2 hours and 21°C (70°F) to 5°C (41°F) within an additional 4 hours.

Blockable drain/suction fitting: A drain or suction fitting in a RECREATIONAL WATER FACILITY that that can be completely covered or blocked by a 457 millimeters x 584 millimeters (18 inches x 23 inches) body-blocking element as set forth in ASME A112.19.8M.

CFR (Code of Federal Regulations): Compilation of the general and permanent rules published in the *Federal Register* by the executive departments and agencies of the federal government. The CFR is published annually by the U.S. Government Printing Office and 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.

Chemical disinfectant: A chemical agent used to kill microbes.

Child activity center: A facility for child-related activities where children under the age of 6 are placed to be cared for by vessel staff.

Children's pool: A pool that has a depth of 1 meter (3 feet) or less and is intended for use by children who are toilet trained.

Child-sized toilet: Toilets whose toilet seat height is no more than 280 millimeters (11 inches) and the toilet seat opening is no greater than 203 millimeters (8 inches).

CIP (cleaned in place): 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. *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.*

Cleaning locker: A room or cabinet specifically designed or modified for storage of cleaning EQUIPMENT such as mops, brooms, floor-scrubbing machines, and cleaning chemicals.

Comminuted: Reduced in size by chopping, flaking, grinding, or mincing. *Examples include FISH or MEAT products that are reduced in size and restructured or reformulated (e.g., gefilte FISH, gyros, ground beef, and sausage) and mixtures of two or more types of MEAT that have been reduced in size and combined (e.g., sausages made from two or more MEATS).*

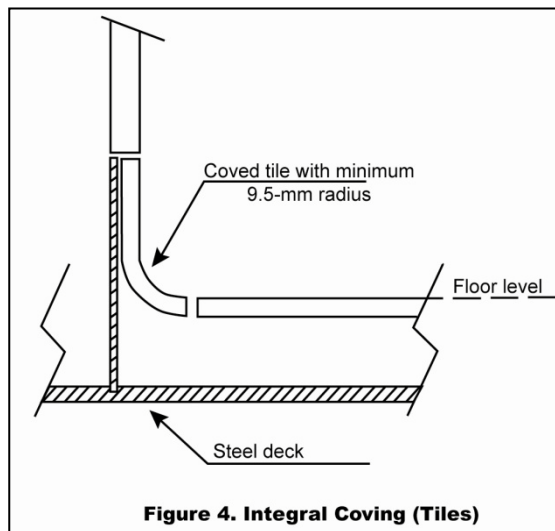
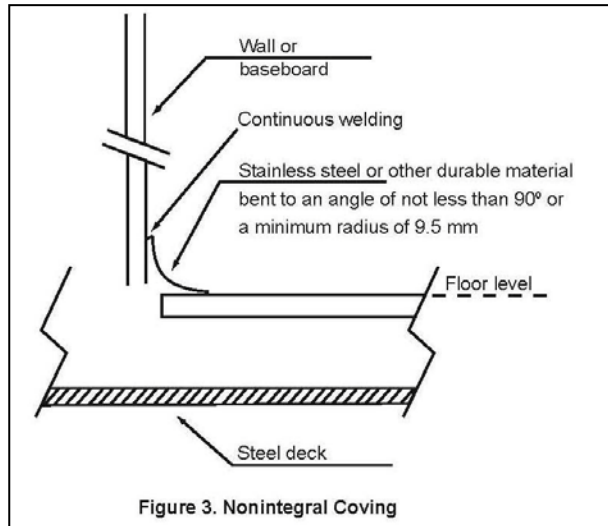
Confirmed disease outbreak: A FOODBORNE OR WATERBORNE DISEASE OUTBREAK in which laboratory analysis of appropriate specimens identifies a causative agent and epidemiologic analysis implicates the food or water as the source of the illness.

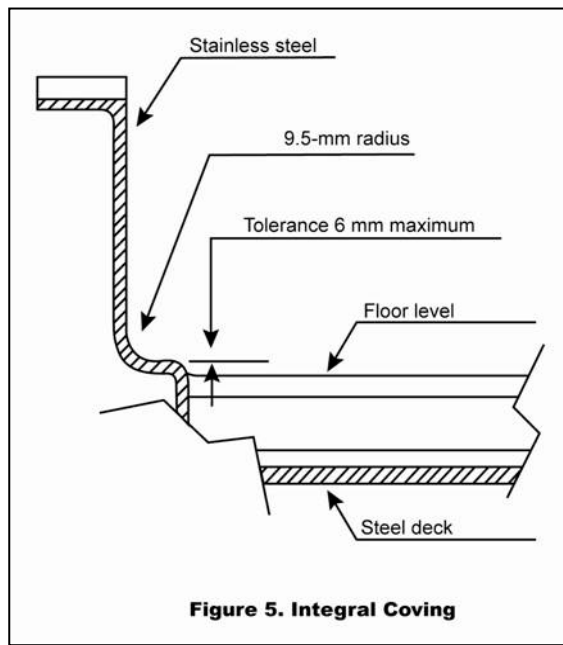
Consumer: A person who takes possession of food, is not functioning as an operator of a food establishment or FOOD-PROCESSING PLANT, and does not offer the food for resale.

Contamination: The presence of an infectious agent on a body surface, in clothes, in bedding, on toys, on surgical instruments or dressings, or on other inanimate articles or substances including food and water.

Continuous pressure (CP) backflow prevention device: A device generally consisting of two check valves and an intermediate atmospheric vent that has been specifically designed to be used under conditions of continuous pressure (greater than 12 hours out of a 24-hour period).

Coved: A concave surface, molding, or other design that eliminates the usual angles of 90° or less at deck junctures (Figures 3, 4, and 5).





Critical item: 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. These are denoted in these guidelines in **bold red underlined text** in parentheses after the section number and keywords; for example, **7.5.5.1 Food-contact Surfaces (24 C)**. The number indicates the individual inspection report item number.

Critical control point: A point or procedure in a specific system where loss of control may result in an unacceptable health risk.

Critical limit: 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 safety hazard.

Cross-connection: An actual or potential connection or structural arrangement between a POTABLE WATER system and any other source or system through which it is possible to introduce into any part of the potable system any used water, industrial fluid, gas, or substance other than the intended POTABLE WATER with which the system is supplied.

CT value: Numerical value used for identifying level at which pathogen destruction/inactivation occurs. *For the purposes of this manual, CT values will be based on free chlorine levels in MG/L (ppm) and time in minutes (CT value=MG/L x minutes).*

Cut leafy greens: Fresh leafy greens whose leaves have been cut, shredded, sliced, chopped, or torn. Leafy greens include iceberg lettuce, romaine lettuce, leaf lettuce, butter lettuce, baby leaf lettuce (i.e., immature lettuce or leafy greens), escarole, endive, spring mix, spinach, cabbage, kale, arugula, and chard. Herbs such as cilantro or parsley are not considered leafy greens.

Date/time of onset: Date/time on which the first symptom appeared.

Deck drain: The physical connection between decks, SCUPPERS, or DECK SINKS and the GRAY or BLACK WATER systems.

Deck sink: A sink recessed into the deck and sized to contain waste liquids from tilting kettles and pans.

Diarrheal disease: Three or more episodes of loose stools in a 24-hour period or a greater than normal (for the person) number of loose stools.

Disinfectant: A chemical or physical agent used to kill microbes.

Disinfection: A process (physical or chemical) that destroys many or all pathogenic microorganisms, except bacterial and mycotic spores, on inanimate objects.

Distillate water: Water condensed from vapor during the evaporation process.

Distillate water lines: Pipes carrying water that is condensed from the evaporators and that may be directed to the POTABLE WATER system.

Double check (DC) valve assembly: A BACKFLOW PREVENTION ASSEMBLY consisting of two internally loaded, independently operating check valves located between two resilient-seated shutoff valves. These assemblies include four resilient-seated test cocks. *These devices do not have an intermediate vent to the atmosphere and are not APPROVED for use on CROSS-CONNECTIONS to the POTABLE WATER system of cruise vessels. CSIP accepts only vented BACKFLOW PREVENTION DEVICES.*

Double check with an intermediate atmospheric vent (DCIV): A BACKFLOW PREVENTION DEVICE with double check valves and an intermediate atmospheric vent located between the two check valves.

Drip tray: READILY REMOVABLE tray to collect dripping fluids or food from food dispensing EQUIPMENT.

Dry storage area: A room or area designated for the storage of PACKAGED or containerized bulk food that is not potentially hazardous and dry goods such as SINGLE-SERVICE ITEMS.

Easily cleanable: A characteristic of a surface that allows effective removal of soil by normal cleaning methods;

Is dependent on the material, design, construction, and installation of the surface; and 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 movable: EQUIPMENT that

- Is PORTABLE; mounted on casters, gliders, or rollers; or provided with a mechanical means to safely tilt it for cleaning; and
- Has no utility connection, has a utility connection that disconnects quickly, or has a flexible utility connection line of sufficient length that allows it to be moved for cleaning of the EQUIPMENT and adjacent area.

Equipment: 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.*

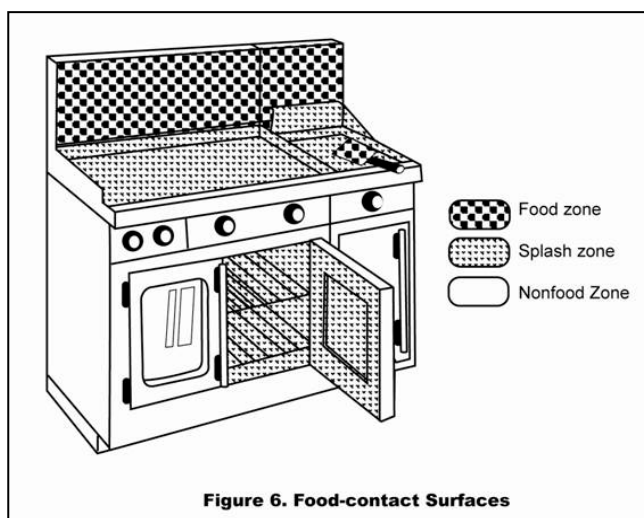
Fish: Fresh water or saltwater finfish, crustaceans, and other forms of aquatic life

(including alligator, frog, aquatic turtle, jellyfish, sea cucumber, 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 processed in any manner.***

Food: 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. Chewing gum is also classified as food.

Food area: Includes food and BEVERAGE display, handling, preparation, service, and storage areas; warewash areas; clean EQUIPMENT storage areas; and table LINEN storage and handling areas.

Food-contact surface: Surfaces (food zone, splash zone) of EQUIPMENT and UTENSILS with which food normally comes in contact and surfaces from which food may drain, drip, or splash back into a food or surfaces normally in contact with food (Figure 6).



Food display areas: Any area where food is displayed for consumption by passengers and/or crew. Applies to displays served by vessel staff or self service.

Food employee: A person working with unpackaged food, food EQUIPMENT or UTENSILS, table LINENS, or FOOD-CONTACT SURFACES.

Food-handling areas: Any area where food is stored, processed, prepared, or served.

Food preparation areas: Any area where food is processed, cooked, or prepared for service.

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

Food service areas: Any area where food is presented to passengers or crew members (excluding individual cabin service).

Food storage areas: Any area where food or food products are stored.

Food transportation corridors: Areas primarily intended to move food during food preparation, storage, and service operations (e.g., service lift [elevator] vestibules to FOOD PREPARATION service and storage areas, provision corridors, and corridors connecting preparation areas and service areas). *Passenger and crew corridors, public areas, individual cabin service, and dining rooms connected to galleys are excluded. Food loading areas used solely for delivery of food to the vessel are excluded.*

Food waste system: A system used to collect, transport, and process food waste from FOOD AREAS to a waste disposal system (e.g., pulper, vacuum system).

Foodborne disease outbreak: An incident in which two or more persons experience a similar illness resulting from the ingestion of a common food.

Game animal: 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.

Gap: An open juncture that is more than 3 millimeters (1/8 inch).

Gastrointestinal Illness (GI)²: Irritation and inflammation of the digestive tract characterized by sudden onset of symptoms of diarrhea and/or vomiting, as well as other constitutional symptoms such as fever, abdominal cramps, headache, or muscle aches.

GI case: See REPORTABLE GI CASE.

GI outbreak: Cases of Gastrointestinal Illness, characterized by diarrhea and vomiting, that are in excess of background rates. For the purposes of this manual, more than 3% is considered in excess of background rates. In addition, an AGE outbreak may be based on two or more laboratory-confirmed cases associated with food or water consumption during the cruise.

General-use pesticide: A pesticide not classified by EPA for restricted use as specified in 40 CFR 152.175.

Grade A standards: Requirements of the 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.

Gray water: Wastewater from galley EQUIPMENT and DECK DRAINS, dishwashers, showers and baths, laundries, washbasins, DECK DRAINS, and recirculated RECREATIONAL WATER FACILITIES. Gray water does not include BLACK WATER or

² US CDC/VSP Operations Manual (2011) uses the term acute gastroenteritis (AGE) to describe gastrointestinal illness (GI). Health Canada will continue to use the term GI. A case of AGE is equivalent to a case of GI.

bilge water from the machinery spaces.

Gutterway: See SCUPPER.

HACCP plan: 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.

Halogen: The group of elements including chlorine, bromine, and iodine used for the DISINFECTION of water.

Hand antiseptic: Antiseptic products applied to human skin.

Harbour: The portion of a port area set aside for vessel anchorage or for ports including wharves; piers; quays; and service areas, the boundaries are the high-water shore line; and others as determined by legal definition, citation of coordinates, or other means.

Hazard: A biological, chemical, or physical property that may cause an unacceptable CONSUMER health risk.

Hermetically sealed container: A container designed 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.

Hose bib connection vacuum breaker (HVB): A BACKFLOW PREVENTION DEVICE that attaches directly to a hose bib by way of a threaded head. This device uses a single check valve and vacuum breaker vent. It is not APPROVED for use under CONTINUOUS PRESSURE (e.g., when a shut-off valve is located downstream from the device). This device is a form of an AVB specifically designed for a hose connection.

Imminent health hazard: 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.

Injected meats: Manipulating 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. This does not include routine temperature monitoring.

Integrated pest management (IPM): A documented, organized system of controlling pests through a combination of methods including inspections, baits, traps, effective sanitation and maintenance, and judicious use of chemical compounds.

Interactive recreational water play systems: Structures that provide a variety of RECREATIONAL WATER FEATURES such as flowing, misting, sprinkling, jetting, and waterfalls. These structures may be zero depth.

Isolation: The separation of persons who have a specific infectious illness from those who are healthy and the restriction of ill persons' movement to stop the spread of that illness. *For CSIP's purposes, isolation for passengers with GI symptoms is advised and isolation for crew with GI symptoms is required.*

Kitchenware: Food preparation and storage UTENSILS.

Law: Applicable local, state, federal, or other equivalent international statutes, regulations, and ordinances.

Linens: Fabric items such as cloth hampers, cloth napkins, tablecloths, wiping cloths, and work garments including cloth gloves.

Making way: Progressing through the water by mechanical or wind power.

Meat: 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.**

Mechanically tenderized: Manipulating MEAT with deep penetration by processes that may be referred to as blade tenderizing; jaccarding; pinning; needling; or using blades, pins, needles, or any mechanical device. It does not include processes by which solutions are injected into MEAT.

mg/L: Milligrams per liter, the metric equivalent of parts per million (ppm).

Molluscan shellfish: 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.**

Noncorroding: Material that maintains its original surface characteristics through prolonged influence by the use environment, food contact, and normal use of cleaning compounds and sanitizing solutions.

Non-food-contact surfaces (non-food zone): All exposed surfaces, other than FOOD-CONTACT SURFACES, of EQUIPMENT located in FOOD AREAS (Figure 6).

Outbreak: See GI OUTBREAK.

Packaged: Bottled, canned, cartoned, securely bagged, or securely wrapped, whether packaged in a food establishment or a FOOD-PROCESSING PLANT. **Packaged does not include a wrapper, carry-out box, or other nondurable container used to containerize food to the facilitate food protection during service and receipt of food by the CONSUMER.**

Permeate water: Water produced by a reverse osmosis unit.

Permeate water lines: Pipes carrying permeate water from the reverse osmosis unit that may be directed to the POTABLE WATER system. This is the CSIP definition for stripping purposes.

Person in charge: 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: 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 cosmetics and toiletries (e.g., toothpaste, mouthwash).**

pH (Potens hydrogen): The symbol for the negative logarithm of the hydrogen ion concentration, which is a measure of the degree of acidity or alkalinity 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 neutral.**

Plumbing fixture: A receptacle or device that
Is permanently or temporarily connected to the water-distribution system of the vessel and demands a supply of water from the system; or
Discharges used water, waste materials, or SEWAGE directly or indirectly to the drainage system of the vessel.

Plumbing system: 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: Substances that are not intended for ingestion. These substances are in four categories:

Cleaners and SANITIZERS, which include cleaning and sanitizing agents and agents such as caustics, acids, drying agents, polishes, and other chemicals.
PESTICIDES [*except SANITIZERS*] that include substances such as insecticides and rodenticides.

Substances necessary for the operation and maintenance of the establishment such as non-food-grade lubricants and PERSONAL-CARE ITEMS that may be deleterious to health.

Substances that are not necessary for the operation and maintenance of the vessel and are on the vessel, such as petroleum products and paints.

Pollution: The presence of any foreign substance (organic, inorganic, radiologic, or biologic) that tends to degrade water quality to create a health HAZARD.

Portable: A description of EQUIPMENT that is READILY REMOVABLE or mounted on casters, gliders, or rollers; provided with a mechanical means so that it can be tilted safely for cleaning; or readily movable by one person.

Potable water: Water that is HALOGENATED and PH controlled and is intended for drinking, washing, bathing, or showering; for use in fresh water SWIMMING POOLS and WHIRLPOOL SPAS; 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 is free from impurities in amounts sufficient to cause disease or harmful physiological effects. The water quality must conform to requirements of the World Health Organization POTABLEWATER standards.

Potable water tanks: All tanks in which POTABLE WATER is stored.

Potentially hazardous food (PHF) (or time/temperature control for safety food [TCS]): Natural or synthetic food that requires time/temperature control because it is in a form capable of supporting

1. The rapid and progressive growth of infectious or toxigenic microorganisms;
2. The growth and toxin production of *Clostridium botulinum*; or
3. The growth of *Salmonella enteritidis* [in raw shell eggs].

PHF 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; CUT LEAFY GREENS; cut tomatoes or mixtures of cut tomatoes; 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 or any food classified by the FDA as a PHF/TCS.

PHF does not include

An air-cooled hard-boiled egg with shell intact, or a shell egg that is not hard-boiled, but has been treated to destroy all viable Salmonellae.

A food with an A_w value of 0.85 or less.

A food with a PH level of 4.6 or below when measured at 24°C (75°F).

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.

*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* cannot occur, such as a food that has an A_w and a PH above the levels specified under Subparagraphs (b) and (c) 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.*

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:

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.

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.

Pressure vacuum breaker assembly (PVB): A device consisting of an independently loaded internal check valve and a spring-loaded air inlet valve. This device is also equipped with two resilient seated gate valves and test cocks.

Primal cut: 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.

Quarantine: The limitation of movement of apparently well persons who have been exposed to a case of communicable (infectious) disease during its period of communicability to prevent disease TRANSMISSION during the incubation period if infection should occur.

Ratite: A flightless bird such as an emu, ostrich, or rhea.

Readily accessible: Exposed or capable of being exposed for cleaning or inspection without the use of tools.

Readily removable: Capable of being detached from the main unit without the use of tools.

Ready-to-eat (RTE) food: 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.

RTE food includes

POTENTIALLY HAZARDOUS FOOD that is unpackaged and cooked to the temperature and time required for the specific food.

Raw, washed, cut fruits and vegetables.

Whole, raw fruits and vegetables presented for consumption without

the need for further washing, such as at a buffet.

Other food presented for consumption for which further washing or cooking is not required and from which rinds, peels, husks, or shells are removed.

Fruits and vegetables that are cooked for hot holding, as specified under section 7.3.4.1.3.

Substances derived from plants such as spices, seasonings, and sugar.

A bakery item such as bread, cakes, pies, fillings, or icing for which further cooking is not required for food safety.

Products produced in accordance with USDA guidelines and that have received a lethality treatment for pathogens: dry, fermented sausages, such as dry salami or pepperoni; salt-cured MEAT and POULTRY products, such as prosciutto ham, country cured ham, and Parma ham; and dried MEAT and POULTRY products, such as jerky or beef sticks.

Foods manufactured as specified in 21 CFR Part 113, Thermally Processed Low-Acid Foods PACKAGED in HERMETICALLY SEALED CONTAINERS.

Recreational water facility (RWF): A water facility that has been modified, improved, constructed, or installed for the purpose of public swimming or recreational bathing. RWFs include, but are not limited to,

ACTIVITY POOLS.

BABY-ONLY WATER FACILITIES.

CHILDREN'S POOLS.

Diving pools.

Hot tubs.

Hydrotherapy pools.

INTERACTIVE RECREATIONAL WATER PLAY SYSTEMS.

Slides.

SPA POOLS.

SWIMMING POOLS,

Therapeutic pools.

WADING POOLS.

WHIRLPOOLS.

Recreational water facility (RWF) seawater: Seawater taken onboard while MAKING WAY at a position at least 12 miles at sea and routed directly to the RWFs for either sea-to-sea exchange or recirculation.

Reduced pressure principle backflow prevention assembly (RP assembly):

An assembly containing two independently acting internally loaded check valves together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves and at the same time below the first check valve. The unit must include properly located resilient seated test cocks and tightly closing resilient seated shutoff valves at each end of the assembly.

Refuse: Solid waste not carried by water through the SEWAGE system.

Registered design professional: An individual registered or licensed to practice his or her respective design profession as defined by the statutory requirements of the professional registration LAWS of the state or jurisdiction in which the project is to be constructed (per ASME A112.19.8-2007).

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

Removable: Capable of being detached from the main unit with the use of simple tools such as a screwdriver, pliers, or an open-end wrench.

Reportable GI case (CSIP / VSP definition): A case of GI with one of the following characteristics:

Diarrhea (three or more episodes of loose stools in a 24-hour period or what is above normal for the individual, e.g., individuals with underlying medical conditions) **OR**

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 of $\geq 38^{\circ}\text{C}$ [100.4°F]); **AND**

Reported to the master of the vessel, the medical staff, or other designated staff by a passenger or a crew member.

Nausea, although a common symptom of GI, is specifically excluded from this definition to avoid misclassifying seasickness (nausea and vomiting) as GASTROINTESTINAL ILLNESS.

Restricted-use pesticide: 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.

Sanitizer: Chemical or physical agents that reduce microorganism CONTAMINATION levels present on inanimate environmental surfaces.

Two classes of sanitizers:

Sanitizers of NON-FOOD-CONTACT SURFACES: The performance standard used by the EPA for these sanitizers requires a reduction of the target microorganism by 99.9% or 3 logs (1000, 1/1000, or 10^3) after 5 minutes of contact time.

Sanitizers of FOOD-CONTACT SURFACES: The EPA performance standard for these sanitizers requires a 99.999% or 5-log reduction of the target microorganism in 30 seconds.

Sanitization: The application of cumulative heat or chemicals on cleaned food-contact and NON-FOOD-CONTACT SURFACES that, when evaluated for efficacy, provides a sufficient reduction of pathogens.

Scupper: A conduit or collection basin that channels liquid runoff to a DECK DRAIN.

Sealant: Material used to fill SEAMS.

Seam: An open juncture that is greater than 0.8 millimeters (1/32 inch) but less than 3 millimeters (1/8 inch).

Sewage: Liquid waste containing animal or vegetable matter in suspension or solution and may include liquids containing chemicals in solution.

Shellstock: Raw, in-shell MOLLUSCAN SHELLFISH.

Shucked shellfish: MOLLUSCAN SHELLFISH with one or both shells removed.

Single-service articles: 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: 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 that do not meet materials, durability, strength, and cleanability specifications.

Slacking: 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: 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. A NON-FOOD-CONTACT SURFACE of EQUIPMENT having a surface equal to that of commercial grade hot-rolled steel free of visible scale. Deck, bulkhead, or deckhead that has an even or level surface with no roughness or projections to make it difficult to clean.

Spa pool: A POTABLE WATER or saltwater-supplied pool with temperatures and turbulence comparable to a WHIRLPOOL SPA.

General characteristics are

- Water temperature of 30°C-40°C or 86°F-104°F.
- Bubbling, jetted, or sprayed water effects that physically break at or above the water surface.
- Depth of more than 1 meter (3 feet).
- Tub volume of more than 6 tons of water.

Spill-resistant vacuum breaker (SVB): A specific modification to a PVB to minimize water spillage.

Spray pad: The play and water contact area that is designed to have no standing water.

Swimming pool: A RECREATIONAL WATER FACILITY greater than 1 meter in depth. This does not include SPA POOLS that meet this depth.

Table-mounted equipment: EQUIPMENT that is not PORTABLE and is designed to be mounted off the floor on a table, counter, or shelf.

Tableware: 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.

Technical water: Water that has not been chlorinated or PH controlled and that originates from a bunkering or condensate collection process, or SEAWATER processed through the evaporators or reverse osmosis plant and is intended for storage and use in the technical water system.

Temperature-measuring device (TMD): A thermometer, thermocouple, thermistor, or other device that indicates the temperature of food, air, or water and is numerically scaled in Celsius and/or Fahrenheit.

Time/temperature control for safety food (TCS): See POTENTIALLY HAZARDOUS FOOD (PHF).

Transmission (of infection): Any mechanism by which an infectious agent is spread from a source or reservoir to another person. These mechanisms are defined as follows:

Direct transmission (includes person-to-person transmission): Direct and essentially immediate transfer of infectious agents to a receptive portal of entry through which human or animal infection may take place.

Indirect transmission: Occurs when an infectious agent is transferred or carried by some intermediate item, organism, means, or process to a susceptible host, resulting in disease. Included are airborne, foodborne, waterborne, vehicleborne (e.g., fomites) and vectorborne modes of transmission.

Turnover: The circulation, through the recirculation system, of a quantity of water equal to the pool volume. For BABY-ONLY WATER FACILITIES, the entire volume of water must pass through all parts of the system to include filtration, secondary ultraviolet (UV) DISINFECTION, and halogenation once every 30 minutes.

Utensil: A food-contact implement or container used in storing, preparing, transporting, dispensing, selling, or serving food. Examples: 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.

Utility sink: Any sink located in a FOOD SERVICE AREA not intended for handwashing and/or WAREWASHING.

Variance: A written document issued by CSIP that authorizes a modification or waiver of one or more requirements of these guidelines if, in the opinion of CSIP, a health HAZARD or nuisance will not result from the modification or waiver.

Wading pool: RECREATIONAL WATER FACILITY with a maximum depth of less than 1 meter.

Warewashing: The cleaning and sanitizing of TABLEWARE, UTENSILS, and FOOD-CONTACT SURFACES OF EQUIPMENT.

Waterborne outbreak: [U.S. Environmental Protection Agency definition] An outbreak involving at least two people who experience a similar illness after ingesting or using water intended for drinking or after being exposed to or unintentionally ingesting or inhaling fresh or marine water used for recreational purposes and epidemiological evidence implicates the water as the source of illness. A single case of chemical poisoning or a laboratory-confirmed case of primary amebic meningoencephalitis is considered an outbreak.

Whirlpool spa: A freshwater or SEAWATER pool designed to operate at a minimum temperature of 30°C (86°F) and maximum of 40°C (104°F) and equipped with either water or air jets.

Whole-muscle, intact beef: Whole-muscle beef that is not injected, MECHANICALLY TENDERIZED, reconstructed, or scored and marinated; and from which beef steaks may be cut.

3.3 Acronyms

ANSI	American National Standards Institute
ASHRAE	American Society of Heating, Refrigeration and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASSE	American Society of Safety Engineers
ASTM	American Society for Testing and Materials
C	Celsius
CDC	Centers for Disease Control and Prevention
CFR	CODE OF FEDERAL REGULATIONS
CIP	CLEAN IN PLACE
CSIP	(CDN) CRUISE SHIP INSPECTION PROGRAM
CT VALUE	CONTACT TIME VALUE
DGMQ	Division of Global Migration and Quarantine
<i>E. coli</i>	<i>Escherichia coli</i>
EHO	Environmental Health Officer
EPA	U.S. Environmental Protection Agency
F	Fahrenheit
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FDA	U.S. Food and Drug Administration
GI	Gastrointestinal Illness
HACCP	HAZARD ANALYSIS CRITICAL CONTROL POINT
HVAC	heating, ventilation, and air conditioning
IATA	International Air Transport Association
IHR	International Health Regulations
IPM	INTEGRATED PEST MANAGEMENT
IPS	iron pipe size
ISO	International Standards Organization
MSDS	material safety data sheets
MG/L	MILLIGRAMS PER LITER
mV	millivolt
NCEH	National Center for Environmental Health
NSF International	National Sanitation Foundation International
OPRP	Outbreak Prevention and Response Plan
ORP	oxidation reduction potential
PH	POTENS HYDROGEN
PHF	POTENTIALLY HAZARDOUS FOOD
ppm	parts per million
RP ASSEMBLY	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY
RO	reverse osmosis
RTE	READY TO EAT
RWF	RECREATIONAL WATER FACILITY
UV	ultraviolet light
CSIP	Vessel Sanitation Program
WHO	World Health Organization

4.0 Gastrointestinal Illness (GI) Surveillance

This section includes the following subsections:

- 4.1 Data Collection
- 4.2 Notification
- 4.3 Clinical Specimens

- 4.4 Requirements for Isolating Symptomatic and Primary Contacts of Crew and Passengers with GI
- 4.5 Knowledge

4.1 Data Collection

4.1.1 Reportable Cases

4.1.1.1 Definition

4.1.1.1.1 **Reportable Case Definition (02) [1 demerit point]**

A reportable case of GI is only a case reported to the master of the vessel, the medical staff, or other designated staff by a passenger or a crew member and meets the definition below.

A case is defined as

- Diarrhea (three or more episodes of loose stools in a 24 hour period or what is above normal for the individual. See section 4.1.2.1.3, illness symptoms); or
- 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 of $\geq 38^{\circ}\text{C}$ [100.4°F]);

Nausea, although a common symptom of GI, is specifically excluded from this definition to avoid misclassifying seasickness (nausea and vomiting) as GI.

4.1.1.1.2 **Onset Time (02) [1 demerit point]**

The reportable cases must include crew members with a symptom onset time of up to 3 days before boarding the vessel. Maintain documentation of the 3-day assessment for each crew member with symptoms on the vessel for review during inspections. Retain this documentation for 12 months.

4.1.1.1.3 **Definition Purpose**

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.

4.1.2 Records

4.1.2.1 Log

4.1.2.1.1 **Responsibility (02) [1 demerit point]**

A standardized GI surveillance log for each cruise must be maintained daily by the master of the vessel, the medical staff, or other designated staff.

4.1.2.1.2 **Required Information (02) [1 demerit point]**

The GI surveillance log must list

- The name of the vessel, cruise dates, and cruise number.
- All reportable cases of GI.
- All passengers and crew members who are dispensed antidiarrheal medication from the master of the vessel, medical staff, or other designated staff.

4.1.2.1.3

Log Details (02) [1 demerit point]

The GI surveillance log entry for each passenger or crew member must contain the following information **in separate columns:**

- Date of the first **medical** visit or report to staff of illness.
- **Time of the first medical visit or report to staff of illness.**
- **Case identification number.**
- Person's name.
- Person's age.
- Person's sex.
- Designation as passenger or crew member.
- Crew member position or job on the vessel, if applicable.
- Cabin number.
- Meal seating information.
- DATE OF ILLNESS ONSET.
- TIME OF ILLNESS ONSET.
- **Illness symptoms, including the presence or absence of the following selected signs and symptoms, with a separate column for each of the following:**
 - Number of episodes of diarrhea **in a 24-hour period.**
 - Number of episodes of vomiting **in a 24-hour period.**
 - Bloody stools.
 - Recorded temperature.
 - Abdominal cramps.
 - Headaches.
 - Muscle aches.
- **Entry (yes/no) for whether this was a reportable case.**
- **Entry (yes/no) for antidiarrheal medications sold or dispensed by designated medical staff.**
- **Presence of underlying medical conditions that may affect interpretation of GI; for example, diabetic diarrhea, inflammatory bowel disease, gastrectomy, antibiotic-induced diarrhea, vomiting from chemotherapy, ear infections in children or others.**

The GI surveillance log must contain the above information in this exact order and entered in the template in Annex 2. The log data must be exported in the exact order as in the example template in Annex 2 with analyzable formats such as Excel or Access. Any additional data fields must be entered only outside of the form margins when exported to Health Canada –CSIP and VSP.

4.1.2.1.4

Medications Sold or Dispensed (02) [1 demerit point]

Antidiarrheal medications must not be sold or dispensed to passengers or crew except by designated medical staff.

4.1.2.2 Questionnaires

4.1.2.2.1 **Food/Beverage Questionnaire (02) [1 demerit point]**

Questionnaires detailing activities and meal locations for the 72 hours before illness onset must be distributed to all passengers and crew members who are GI CASES. The self-administered questionnaires must contain all of the data elements that appear in the questionnaire found in Annex 2. Completed questionnaires must be maintained with the GI surveillance log.

To assist passengers and crew members with filling out the self-administered questionnaires, the following information for the most current cruise may be maintained at the medical center:

- *Menus, food, and drink selections available at each venue on the vessel, from room service, and on private islands.*
- *Menus, food, and drink selections available for each vessel-sponsored excursion.*
- *Organized activities on the vessel or private islands.*
- *Cruise line sponsored pre-embarkation activities.*

To assist memory recall for guests and crew completing the 72-hour self-administered questionnaire, an electronic listing of the above information on an interactive system available via an onboard video system can be substituted for the package in the medical center.

4.1.2.3 Retention

4.1.2.3.1 **Retention and Review (02) [1 demerit point]**

The following records must be maintained on board for 12 months and available for review by CSIP during inspections and outbreak investigations:

- Medical log/record.
- GI surveillance log.
- 72-hour self-administered questionnaires.
- Interviews with cabin mates and immediate contacts of crew members with GI (initial, 24-, and 48-hour).
- Documentation of the 3-day assessment of crew members **with GI** symptoms before joining the vessel.
- Documentation of the date and time of last symptom and clearance to return to work for FOOD and non-FOOD EMPLOYEES.
- Documentation of the date and time of verbal interviews with asymptomatic cabin mates and immediate contacts of symptomatic crew.

Electronic records of these documents are acceptable as long as the data are complete and can be retrieved during inspections and outbreak investigations.

4.1.2.4 Confidentiality

4.1.2.4.1 Privacy

All personal medical information received by Health Canada personnel must be protected in accordance with applicable federal LAW.

4.2 Notification

4.2.1 Routine Report

4.2.1.1 Routine Report Timing

4.2.1.1.1 24-hour Report (01) [4 demerit points]

The master, medical staff, or other designated staff of a vessel destined for a Canadian port from a foreign port must submit at least one standardized GI report based on the number of reportable cases in the GI log to CSIP no less than 24 hours—but not more than 36 hours—before the vessel's expected arrival at the Canadian port.

4.2.1.1.2 4-hour Update Report (01) [4 demerit points]

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

4.2.1.1.3 Report Submission (02) [1 demerit point]

Submit routine 24-hour and 4-hour update reports electronically. In lieu of electronic notification, the reports may be submitted by telephone or fax. The vessel must maintain proof onboard that the report was successfully received by Health Canada - CSIP.

4.2.1.2 Report Contents

4.2.1.2.1 Contents (01) [4 demerit points]

The GI report must contain the following:

- Name of the vessel.
- Port of embarkation.
- Date of embarkation.
- Port of disembarkation.
- Date of disembarkation.
- Total numbers of reportable cases of GI among passengers, including those who have disembarked because of illness—even if the number is 0 (zero reporting).
- Total numbers of reportable cases of GI among crew members, including those who have disembarked because of illness—even if the number is 0 (zero reporting).
- Total number of passengers and crew members on the cruise.

4.2.1.2.2 Cruise Length

For cruises lasting longer than 15 days before entering a Canadian port, the GI report may include only those reportable cases and total numbers of passengers and crew members for the 15 days before the expected arrival at a Canadian port.

4.2.2 Special Report

4.2.2.1 Special Report Timing

4.2.2.1.1 2% and 3% Illness Report (01) [4 demerit points]

The master or designated corporate representative of a vessel with an international itinerary destined for a Canadian port must submit a special report at any time during a cruise, including between two Canadian ports, when the cumulative percentage of reportable cases entered in the GI surveillance log reaches 2% among passengers or 2% among crew and the vessel is within 15 days of expected arrival at a Canadian port.

A telephone notification to Health Canada - CSIP must accompany the special 2% report. **24hr/7 day: 1-877-742-2538**

A second special report must be submitted when the cumulative percentage of reportable cases entered in the GI surveillance log reaches 3% among passengers or 3% among crew and the vessel is within 15 days of expected arrival at a Canadian port.

4.2.2.1.2 Daily Updates (01) [4 demerit points]

Daily updates of illness status must be submitted as requested by Health Canada - CSIP after the initial submission of a special report. Daily updates may be submitted electronically, by telephone, fax, e-mail, or as requested by Health Canada - CSIP.

4.2.2.1.3 Routine Reporting Continues (01) [4 demerit points]

Routine reports (24-hour and 4-hour) must continue to be submitted by the master or designated corporate representative of a vessel that has submitted a special report.

4.2.3 Report Retention

4.2.3.1 Retention

4.2.3.1.1 Retention (02) [1 demerit point]

The 24-hour, 4-hour, and special reports must be maintained on the vessel for 12 months.

4.2.3.1.2 Review (02) [1 demerit point]

The reports must be available for review by CSIP during inspections and outbreak investigations.

4.3 Clinical Specimens

4.3.1 Clinical Specimen Submission

See Annex 13.4 of the VSP Ops Manual 2011 for a list of recommended

specimen collection supplies.

4.3.1.1 Specimen/Shipping Containers (02) [1 demerit point]

The medical staff will be responsible for maintaining a supply of at least 10 clinical specimen collection containers for both viral and bacterial agents (10 for each), as well as a shipping container that meets the latest shipping requirements of the International Air Transport Association (IATA) and U.S. Department of Transportation for Biological Substances, Category B designated shipments (or higher) and / or equivalent Canadian regulations.

The vessel must maintain the appropriate labels and markings required for shipping Biological Substances, Category B shipments. The vessel must maintain appropriate refrigerant materials to keep clinical specimens cool. For guidance, see VSP Ops Manual 2011 - Annex 13.4.

4.3.2 Clinical Specimen Submission Collection Procedures

4.3.2.1 When to Collect (02) [1 demerit point]

When a vessel reaches 2% REPORTABLE GI in either passengers or crew members, the medical staff will begin collecting clinical specimens (stool or vomitus specimens) for bacterial and viral analysis. If the etiologic agent is suspected to be parasitic, the medical staff should consult with Health Canada epidemiology staff for clinical specimen collection requirements.

4.3.2.2 Proper Packing (02) [1 demerit point]

All clinical specimens must be packed and shipped in accordance with the guidelines outlined in Annex 13.4 (See VSP OPS Manual 2011). The specimen packaging must include the proper documentation as required by the receiving laboratory.

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

4.4.1 Crew, Staff, Officers, and Other Employees

4.4.1.1 Isolate Ill Crew

4.4.1.1.1 Symptomatic and Meeting the Case Definition Gastrointestinal Illness (GI) (11 C) [4 demerit points]

FOOD EMPLOYEES:

- Isolate in cabin or designated restricted area until symptom-free for a minimum of 48 hours.
- Follow-up with and receive approval by designated medical personnel before returning crew to work.
- Document date and time of last symptom and clearance to return to work.

Non-FOOD EMPLOYEES:

- ISOLATION in cabin or designated restricted area until symptom-free for a minimum of 24 hours.
- Follow-up with and receive approval by designated medical personnel before returning crew to work.
- Document the date and time of last symptom and clearance to return to work.

4.4.1.1.2 Hygiene and Handwashing Facts (02) [1 demerit point]

Advise symptomatic crew of hygiene and handwashing facts and provide written handwashing and hygiene fact sheets.

4.4.1.2 Cabin Mates/Contacts (02) [1 demerit point]

4.4.1.2.1 Asymptomatic Cabin Mates or Immediate Contacts of Symptomatic Crew

FOOD and non-FOOD EMPLOYEES:

- Restrict exposure to symptomatic crew member(s).
- **Undergo** a verbal interview with **medical or supervisory staff**, who will confirm their condition, **provide facts and a written fact sheet about hygiene and handwashing**, and instruct them to report immediately to medical if they develop illness symptoms.
- Complete a verbal interview daily with medical or supervisory staff until 48 hours after the ill crew members' symptoms began. **The first verbal interview must be conducted within 8 hours from the time the ill crew member initially reported to the medical staff. If the asymptomatic immediate contact or cabin mate is at work, he or she must be contacted by medical or supervisory staff as soon as possible. The date and time of verbal interviews must be documented.**

4.4.2 Passengers

4.4.2.1 Isolate Ill Passengers (11 C) [4 demerit points]

Symptomatic and meeting the case definition for GI:

- Advise them to remain isolated in their cabins until well for a minimum of 24 hours after symptom resolution.
- Follow-up by infirmary personnel is advised.

4.4.2.2 Hygiene and Handwashing Facts (02) [1 demerit point]

Advise symptomatic passengers of hygiene and handwashing facts and provide written handwashing and hygiene fact sheets.

4.5 Gastrointestinal Illness Surveillance Knowledge

4.5.1 Demonstration of Knowledge (44) [2 demerit points]

The person in charge of medical operations related to GI on the vessel must demonstrate to Health Canada) - during inspections and on request—knowledge of medical operations related to GI. The person in charge must demonstrate this knowledge by compliance with this section of these guidelines or by responding correctly to the inspector's questions as they relate to the specific operation. In addition, the person in charge of medical operations related to GI on the vessel must ensure that employees are properly trained to comply with this section of the guidelines in this manual as it relates to their assigned duties.

5.0 Potable Water

This section includes the following subsections:

- 5.1 Source
- 5.2 Bunker and Production Halogenation **and pH Control**
- 5.3 POTABLE WATER System
- 5.4 POTABLE WATER System Chemical Treatment

- 5.5 POTABLE WATER System HALOGEN Monitoring
- 5.6 Microbiologic Monitoring
- 5.7 Water Distribution System Protection
- 5.8 Knowledge

5.1 Source

5.1.1 Bunkering

5.1.1.1 Standards

5.1.1.1.1 Safe Source (03 C) [5 demerit points]

POTABLE WATER bunkered from shore supplies must be from a potable source that meets World Health Organization standards for POTABLE WATER.

5.1.1.2 Microbiologic Sample Reports

5.1.1.2.1 Water Report (06) [2 demerit points]

Where available, the vessel must have a copy of the most recent microbiologic report from each port before bunkering POTABLE WATER to verify that the water meets potable standards. *The date of the analysis report must be 30 days or less from the date of POTABLE WATER bunkering, and the report must include an analysis for Escherichia coli at a minimum.*

5.1.1.2.2 Onboard Test (06) [2 demerit points]

Water samples collected and analyzed by the vessel for the presence of E. coli may be substituted for the microbiologic report from each port water system. The samples must be analyzed using a method accepted in Standard Methods for the Examination of Water and Wastewater. *Test kits, incubators, and associated EQUIPMENT must be operated and maintained in accordance with the manufacturers' specifications. If a vessel bunkers POTABLE WATER from the same port more than once per month, only one test per month is required.*

5.1.1.2.3 Review (06) [2 demerit points]

These records must be maintained on the vessel for 12 months and must be available for review during inspections.

5.1.2 Water Production

5.1.2.1 Location

5.1.2.1.1 Polluted Harbours (03 C) [5 demerit points]

A reverse osmosis unit, distillation plant, or other process that supplies water to the vessel's POTABLE WATER system *must only operate while the vessel is MAKING WAY. These processes must not operate in polluted areas, HARBOURS, or at anchor.*

5.1.2.1.2 Technical Water

A reverse osmosis unit or evaporator with a completely separate plant/process, piping system, and connections from the POTABLE WATER system, may be used to produce TECHNICAL WATER while in polluted areas, HARBOURS, at

anchor, or while not MAKING WAY.

5.2 Bunkering and Production Halogenation and pH Control

5.2.1 Procedures

5.2.1.1 Residual Halogen and pH

5.2.1.1.1 Halogen and pH Level (03 C) [5 demerit points]

POTABLE WATER must be continuously HALOGENATED to at least 2.0 MG/L (ppm) free residual HALOGEN at the time of bunkering or production with an automatic halogenation device. Adjust the PH so it does not exceed 7.8.

The amount of HALOGEN injected during bunkering or production must be controlled by a flow meter or a free HALOGEN analyzer.

5.2.1.1.2 Within 30 Minutes (08) [1 demerit point]

The free HALOGEN residual level must be adjusted to at least 2.0 MG/L (ppm) within 30 minutes of the start of the bunkering and production processes.

5.2.1.2 Monitoring

5.2.1.2.1 Bunkering Pretest (08) [1 demerit point]

A free HALOGEN residual and PH test must be conducted on the shore-side water supply before starting the POTABLE WATER bunkering process to establish the correct HALOGEN dosage.

The results of the pretest must be recorded and available for review during inspections.

5.2.1.2.2 Bunkering/Production Test (08) [1 demerit point]

After the free residual HALOGEN level of at least 2.0 MG/L (ppm) and PH level not exceeding 7.8 have been reached, the free residual HALOGEN and PH monitoring must be performed at least hourly during the bunkering of POTABLE WATER.

After the free residual HALOGEN level of at least 2.0 MG/L (ppm) and PH level not exceeding 7.8 have been reached, free residual HALOGEN and PH monitoring must be performed at least once every 4 hours during the production of POTABLE WATER.

5.2.1.2.3 Records (08) [1 demerit point]

Accurate records of this monitoring must be maintained aboard for 12 months and must be available for review during inspections.

5.2.1.2.4 Analyzer-chart Recorders (06) [2 demerit points]

HALOGEN and PH analyzer-chart recorders used in lieu of manual tests and logs must be calibrated at the beginning of bunkering or production, and the calibration must be recorded on the chart.

5.2.1.2.5 Construction (06) [2 demerit points]

HALOGEN and PH analyzer-chart recorders used on bunker water systems must be constructed and installed according to the

manufacturer's guidelines.

5.2.1.2.6 Data Logger [0 demerit points]

Electronic data loggers with certified data security features may be used in lieu of chart recorders.

5.2.1.2.7 Halogen Injection (08) [1 demerit point]

Water samples for HALOGEN and PH testing must be obtained from a sample cock and/or a HALOGEN analyzer probe located on the bunker or production water line at least 3 meters (10 feet) after the HALOGEN injection point and before the storage tank.

A static mixer may be used to reduce the distance between the HALOGEN injection point and the sample cock or HALOGEN analyzer sample point. Ensure the mixer is installed per the manufacturer's recommendations. Maintain a copy of all manufacturers' literature for installation, operation, and maintenance.

5.2.1.2.8 Tank Sample [0 demerit points]

In the event of EQUIPMENT failure, bunker or production water HALOGEN samples may also be taken from POTABLE WATER TANKS that were previously empty.

5.3 Potable Water System

5.3.1 Potable Water Tanks

5.3.1.1 Protection

5.3.1.1.1 Potable Water Tank Walls (07 C) [3 demerit points]

POTABLE WATER TANKS must not share a common wall with the hull of the vessel or with tanks or piping containing nonpotable water or other liquids.

5.3.1.1.2 Nonpotable Piping (08) [1 demerit point]

Piping systems carrying SEWAGE or other nonpotable liquids must not pass through POTABLE WATER TANKS. Minimize the use of nonpotable lines above POTABLE WATER TANKS. Nonpotable lines above POTABLE WATER TANKS must not have any mechanical couplings.

For SCUPPER lines, factory assembled transition fittings for steel to plastic pipes are allowed when manufactured per American Society for Testing and Materials (ASTM) F1973 or equivalent standard.

5.3.1.1.3 Coatings (08) [1 demerit point]

Interior coatings on POTABLE WATER TANKS must be APPROVED for POTABLE WATER contact by a certification organization. Follow all manufacturers' recommendations for application, drying, and curing.

The following must be maintained on board for the tank coatings used:

- Written documentation of approval from the certification

organization (independent of the coating manufacturer).

- Manufacturers' recommendations for application, drying, and curing.
- Written documentation that the manufacturers' recommendations have been followed for application, drying, and curing.

5.3.1.2 Tank Construction

5.3.1.2.1 *Identification (08) [1 demerit point]*

POTABLE WATER TANKS must be identified with a number and the words "POTABLE WATER" in letters **at least** 13 millimeters (0.5 inch) high.

5.3.1.2.2 *Sample Cocks (08) [1 demerit point]*

POTABLE WATER TANKS must have **labeled** sample **cocks** that are turned down. **They must be identified and numbered with the appropriate tank number.**

5.3.1.2.3 *Vent/Overflow (08) [1 demerit point]*

The POTABLE WATER TANKS, vents, and overflows must be protected from CONTAMINATION.

5.3.1.2.4 *Level Measurement (08) [1 demerit point]*

Any device for determining the depth of water in the POTABLE WATER TANKS must be constructed and maintained so as to prevent contaminated substances or liquids from entering the tanks.

5.3.1.2.5 *Manual Sounding (08) [1 demerit point]*

Manual sounding of POTABLE WATER TANKS must be performed only in emergencies and must be performed in a sanitary manner.

5.3.2 Potable Water Piping

5.3.2.1 Protection

5.3.2.1.1 *Identification (08) [1 demerit point]*

Stripe or paint POTABLE WATER lines either in accordance with ISO 14726 (**blue/green/blue**) or blue only.

Stripe or paint DISTILLATE and PERMEATE lines directed to the POTABLE WATER system in accordance with ISO 14726 (blue/gray/blue).

Other lines must not have the above color designations.

Paint or stripe these lines at 5 meters (15 feet) intervals and on each side of partitions, decks, and bulkheads except where decor would be marred by such markings. **This includes POTABLE WATER supply lines in technical lockers.**

POTABLE WATER lines after reduced pressure assemblies must not be striped as POTABLE WATER.

Striping is not required in FOOD AREAS of the vessel because only POTABLE WATER is permitted in these areas.

Uniquely identify all refrigerant brine lines in all galleys, pantries, and cold rooms to prevent CROSS-CONNECTIONS.

5.3.2.1.2 Protection (07 C) [3 demerit points]

POTABLE WATER piping must not pass under or through tanks holding non-potable liquids.

5.3.2.1.3 Bunker Connection (08) [1 demerit point]

The POTABLE WATER bunker filling line must begin either horizontally or pointing downward and at a point at least 460 millimeters (18 inches) above the bunker station deck.

5.3.2.1.4 Cap/Keeper Chain (08) [1 demerit point]

The POTABLE WATER filling line must have a screw cap fastened by a NONCORRODING cable or chain to an adjacent bulkhead or surface in such a manner that the cap cannot touch the deck when hanging free.

The hose connections must be unique and fit only the POTABLE WATER hoses.

5.3.2.1.5 Identification (08) [1 demerit point]

Each bunker station POTABLE WATER filling line must be striped or painted blue or in accordance with the color designation in ISO 14726 (blue/green/blue) and clearly labeled "POTABLE WATER FILLING" in letters at least 13 millimeters (0.5 inch) high, stamped on a noncorrosive label plate or the equivalent, and located at or near the point of the hose connection.

5.3.2.1.6 Technical Water (08) [1 demerit point]

TECHNICAL WATER, if used on the vessel, must be bunkered through separate piping using fittings incompatible for POTABLE WATER bunkering.

5.3.2.1.7 Different Piping (08) [1 demerit point]

TECHNICAL WATER must flow through a completely different piping system.

5.3.3 Potable Water Hoses

5.3.3.1 Construction

5.3.3.1.1 Fittings (08) [1 demerit point]

POTABLE WATER hoses must have unique fittings from all other hose fittings on the vessel.

5.3.3.1.2 Identification (08) [1 demerit point]

POTABLE WATER hoses must be labeled for use with the words "POTABLE WATER ONLY" in letters at least 13 millimeters (0.5 inch) high at each connecting end.

5.3.3.1.3 Construction (08) [1 demerit point]

All hoses, fittings, and water filters used in the bunkering of POTABLE WATER must be constructed of safe, EASILY CLEANABLE materials APPROVED for POTABLE WATER use and must be maintained in good repair.

5.3.3.1.4 Other Equipment (08) [1 demerit point]

Other EQUIPMENT and tools used in the bunkering of POTABLE WATER must be constructed of safe, EASILY CLEANABLE materials, dedicated solely for POTABLE WATER use, and maintained in good repair.

5.3.3.1.5 Locker Construction (08) [1 demerit point]

POTABLE WATER hose lockers must be constructed of SMOOTH, nontoxic, corrosion resistant, EASILY CLEANABLE material and must be maintained in good repair.

5.3.3.1.6 Locker Identification (08) [1 demerit point]

POTABLE WATER hose lockers must be marked "POTABLE WATER HOSE AND FITTING STORAGE" in letters at least 13 millimeters (0.5 inch) high.

5.3.3.1.7 Locker Height (08) [1 demerit point]

POTABLE WATER hose lockers must be mounted at least 460 millimeters (18 inches) above the deck and must be self draining.

5.3.3.1.8 Locker Closed (08) [1 demerit point]

Locker doors must be closed when not in use.

5.3.3.1.9 Locker Restriction (08) [1 demerit point]

The locker must not be used for any other purpose than storing POTABLE WATER EQUIPMENT such as hoses, fittings, sanitizing buckets, SANITIZER solution, etc.

5.3.3.2 Handling

5.3.3.2.1 Limit Use (08) [1 demerit point]

POTABLE WATER hoses must not be used for any other purpose.

5.3.3.2.2 Handling (08) [1 demerit point]

All hoses, fittings, water filters, buckets, EQUIPMENT, and tools used for connection with the bunkering of POTABLE WATER must be handled and stored in a sanitary manner.

5.3.3.2.3 Contamination Prevention (08) [1 demerit point]

POTABLE WATER hoses must be handled with care to prevent CONTAMINATION by dragging their ends on the ground, pier, or deck surfaces, or by dropping the hose into contaminated water, such as on the pier or in the HARBOUR.

5.3.3.2.4 Flush/Drain (08) [1 demerit point]

POTABLE WATER hoses must be flushed with POTABLE WATER before being used and must be drained after each use.

5.3.3.2.5 Storage (08) [1 demerit point]

POTABLE WATER hoses must be rolled tight with the ends capped, on reels, or on racks, or with ends coupled together and stowed in POTABLE WATER hose lockers.

5.3.4 Potable Water System Contamination

5.3.4.1 Cleaning and Disinfection

5.3.4.1.1 Disinfecting (07 C) [3 demerit points]

POTABLE WATER TANKS and all affected parts of the POTABLE WATER distribution system must be cleaned, disinfected, and flushed with POTABLE WATER:

- Before being placed in service;
- Before returning to operation after repair, replacement; or
- After being subjected to any CONTAMINATION, including entry into a POTABLE WATER tank.

5.3.4.1.2 Annual Inspection (08) [1 demerit point]

POTABLE WATER TANKS must be inspected, cleaned, and disinfected during dry docks and wet docks, or every 2 years, whichever is less.

5.3.4.1.3 Record Retention (08) [1 demerit point]

Documentation of all inspections, maintenance, cleaning, and DISINFECTION must be maintained for 12 months and must be available for review during inspections.

Records must include method of DISINFECTION, concentration and contact time of the DISINFECTANT, and a recorded HALOGEN value of less than or equal to 5 ppm before the tank can be put back into service.

5.3.4.1.4 Disinfection Residual (07 C) [3 demerit points]

DISINFECTION after potential CONTAMINATION must be accomplished by increasing the free residual HALOGEN to at least 50 MG/L (ppm) throughout the affected area and maintaining this concentration for 4 hours or by way of another procedure submitted to and accepted by Health Canada (and/or VSP).

In an emergency, this contact time may be shortened to 1 hour by increasing free residual HALOGEN to at least 200 MG/L (ppm) throughout the affected area.

5.3.4.1.5 Documentation (08) [1 demerit point]

The free HALOGEN residual level must be documented.

5.3.4.1.6 Flush (08) [1 demerit point]

The disinfected parts of the system must be flushed with POTABLE WATER or otherwise dechlorinated until the free residual HALOGEN is ≤ 5.00 MG/L (ppm). The free HALOGEN test result must be documented.

5.3.4.1.7 Alternative Method (08) [1 demerit point]

An alternative POTABLE WATER tank cleaning and DISINFECTION procedure that is **ONLY** APPROVED for routine cleaning and DISINFECTION and is **NOT** APPROVED for known or suspected contaminated tanks follows:

- 1) Remove (strip) all water from the tank.
- 2) Clean all tank surfaces, including filling lines, etc., with an appropriate detergent.
- 3) Thoroughly rinse surfaces of the tank with POTABLE WATER and strip this water.
- 4) Wet all surfaces of the tank with at least a 200 ppm (MG/L) solution of chlorine (this can be done using new, clean mops, rollers, sprayers, etc.). The chlorine test to ensure at least 200 ppm (MG/L) chlorine must be documented.
- 5) Ensure that tank surfaces remain wet with the chlorine solution for at least 2 hours.
- 6) Refill the tank and verify that the chlorine level is ≤ 5.0 ppm (MG/L) before placing the tank back into service. The chlorine test result must be documented.

5.4 Potable Water System Chemical Treatment

5.4.1 Chemical Injection Equipment

5.4.1.1 Construction and Installation

5.4.1.1.1 Recommended Engineering Practices (06) [2 demerit points]

All distribution water system chemical injection EQUIPMENT must be constructed and installed in accordance with recommended engineering practices.

5.4.1.2 Operation

5.4.1.2.1 Halogen Residual (04 C) [5 demerit points]

The halogenation injection EQUIPMENT must provide continuous halogenation of the POTABLE WATER distribution system and must maintain a free residual HALOGEN of ≥ 0.2 MG/L (ppm) and ≤ 5.0 MG/L (ppm) throughout the distribution system.

5.4.1.2.2 Controlled (08) [1 demerit point]

The amount of chemicals injected into the POTABLE WATER system must be analyzer controlled.

5.4.1.2.3 Halogen Backup Pump (06) [2 demerit points]

At least one backup HALOGEN pump must be installed with an active, automatic switchover feature to maintain the free residual HALOGEN in the event that the primary pump fails, an increase in demand occurs, or the low chlorine alarm sounds.

5.5 Potable Water System Halogen Monitoring

5.5.1 Halogen Analyzer-chart Recorder

5.5.1.1 Installation

5.5.1.1.1 ***Distant Point (06) [2 demerit points]***

A HALOGEN analyzer-chart recorder must be installed at a distant point in the POTABLE WATER distribution system where a significant water flow exists and represents the entire distribution system. In cases where **multiple** distribution loops exist and no pipes connect the loops, there must be an analyzer and chart recorder for each loop.

5.5.1.1.2 ***Data Logger [0 demerit points]***

Electronic data loggers with certified data security features may be used in lieu of chart recorders.

5.5.1.2 Operation

5.5.1.2.1 ***Maintenance (06) [2 demerit points]***

The HALOGEN analyzer-chart recorder must be properly maintained and must be operated in accordance with the manufacturer's instructions.

A manual comparison test must be conducted daily to verify calibration. Calibration must be made whenever the manual test value is > 0.2 ppm higher or lower than the analyzer reading.

5.5.1.2.2 ***Calibration (06) [2 demerit points]***

The daily manual comparison test or calibration must be recorded either on the recorder chart or in a log.

5.5.1.2.3 ***Accuracy (06) [2 demerit points]***

The free residual HALOGEN measured by the HALOGEN analyzer must be ± 0.2 MG/L (ppm) of the free residual HALOGEN measured by the manual test.

5.5.1.2.4 ***Test Kit (06) [2 demerit points]***

The HALOGEN test kit used to calibrate the HALOGEN analyzer must be **accurate to within 0.2 MG/L (ppm) for HALOGEN** and graduated in increments no greater than 0.2 MG/L (ppm) in the range of free residual HALOGEN normally maintained in the POTABLE WATER system.

Ensure that all reagents used with the test kit are not past their expiration dates.

Where available, ensure that appropriate secondary standards are onboard for electronic test kits to verify test kit operation.

5.5.2 Halogen Analyzer Charts

5.5.2.1 Chart Design

5.5.2.1.1 *Range (06) [2 demerit points]*

HALOGEN analyzer-chart recorder charts must have a range of 0.0 to 5.0 MG/L (ppm) and have a recording period of—**and limited to**—24 hours.

5.5.2.1.2 *Data Logger (06) [2 demerit points]*

Electronic data loggers with certified data security features used in lieu of chart recorders must produce records that conform to the principles of operation and data display required of the analog charts, including printing the records.

5.5.2.1.3 *Increments (06) [2 demerit points]*

Electronic data logging must be in increments of ≤ 15 minutes.

5.5.2.2 Operation

5.5.2.2.1 *Charts (06) [2 demerit points]*

HALOGEN analyzer-chart recorder charts must be changed, initialed, and dated daily. Charts must contain notations of any unusual events in the POTABLE WATER system.

5.5.2.2.2 *Retention (06) [2 demerit points]*

HALOGEN analyzer-chart recorder charts must be retained for at least 12 months and must be available for review during inspections.

5.5.2.2.3 *Chart Review (06) [2 demerit points]*

Records from the HALOGEN analyzer-chart recorder must verify the free residual HALOGEN of ≥ 0.2 MG/L (ppm) and ≤ 5.0 MG/L (ppm) in the water distribution system for at least 16 hours in each 24-hour period since the last inspection of the vessel.

5.5.3 Manual Halogen Monitoring

5.5.3.1 Equipment Failure

5.5.3.1.1 *Every 4 hours (06) [2 demerit points]*

Free residual HALOGEN must be measured by a manual test kit at the HALOGEN analyzer at least every 4 hours in the event of EQUIPMENT failure.

5.5.3.1.2 *Recording (06) [2 demerit points]*

Manual readings must be recorded on a chart or log, retained for at least 12 months, and available for review during inspections.

5.5.3.1.3 *Limit (06) [2 demerit points]*

Repairs on malfunctioning HALOGEN analyzer-chart recorders must be completed within 10 days of EQUIPMENT failure.

5.5.3.1.4 Alarm (06) [2 demerit points]

Provide an audible alarm in a continuously occupied watch station (e.g., the engine control room) to indicate low and high free HALOGEN readings at the distant point analyzer.

5.6 Microbiologic Monitoring

5.6.1 Sampling and Analysis

5.6.1.1 Methodology

5.6.1.1.1 Samples (06) [2 demerit points]

A minimum of four POTABLE WATER samples per month must be collected and analyzed for the presence of *E. coli*. Samples must be collected from the forward, aft, upper, and lower decks of the vessel.

Sample sites must be changed each month ensure that all of the POTABLE WATER distribution system is effectively monitored.

Follow-up sampling must be conducted for each positive test result.

Microbiological samples from ice machines and POTABLE WATER storage tanks do not count toward the monthly routine distribution system monitoring.

5.6.1.1.2 Analysis (06) [2 demerit points]

Samples must be analyzed using a method accepted in Standard Methods for the Examination of Water and Wastewater. Test kits, incubators, and associated EQUIPMENT must be operated and maintained in accordance with the manufacturers' specifications.

5.6.1.2 Records

5.6.1.2.1 Records (06) [2 demerit points]

Sample results must be maintained onboard the vessel for at least 12 months and must be available for review during inspections.

5.7 Water Distribution System Protection

5.7.1 Cross-connection Control

5.7.1.1 Program

5.7.1.1.1 Cross-connections (07 C) [3 demerit points]

The POTABLE WATER distribution system must be maintained free of CROSS-CONNECTIONS.

5.7.1.1.2 Protection (07 C) [3 demerit points]

The POTABLE WATER system must be protected against BACKFLOW or other CONTAMINATION by BACKFLOW PREVENTION DEVICES or AIR GAPS. The PERMEATE lines and DISTILLATE lines directed toward the POTABLE WATER system must also be protected.

5.7.1.1.3

Control/Program (08) [1 demerit point]

The vessel must provide a comprehensive CROSS-CONNECTION control program.

Protect the following connections to the POTABLE WATER system against BACKFLOW (BACKSIPHONAGE or BACKFLOW) with AIR GAPS or mechanical BACKFLOW PREVENTION DEVICES:

- RWFs such as SWIMMING POOLS, CHILDREN'S/WADING POOLS, WHIRLPOOL SPAS, and similar facilities.
- Decorative water features/fountains.
- Cabin shower hoses, toilets, whirlpool tubs, and similar facilities.
- Photographic laboratory developing machines and UTILITY SINKS.
- Beauty and barber shop spray-rinse hoses.
- Spa steam generators where essential oils can be added.
- Hose-bib connections.
- Garbage grinders and FOOD WASTE SYSTEMS.
- Automatic galley hood washing systems.
- Food service EQUIPMENT such as coffee machines, ice machines, juice dispensers, combination ovens, and similar EQUIPMENT.
- Mechanical WAREWASHING machines.
- Detergent dispensers.
- Hospital and laundry EQUIPMENT.
- Air conditioning expansion tanks.
- Boiler feed water tanks.
- Fire system.
- Public toilets, urinals, and shower hoses.
- POTABLE WATER, bilge, and pumps that require priming.
- Freshwater or saltwater ballast systems.
- International fire and fire sprinkler water connections. An RP ASSEMBLY is the only allowable device for this connection.
- The POTABLE WATER supply to automatic window washing systems that can be used with chemicals or chemical mix tanks.
- Water softeners for nonpotable fresh water.
- Water softener and mineralizer drain lines including backwash drain lines. The only allowable protections for these lines are an AIR GAP or an RP ASSEMBLY.
- High saline discharge line from evaporators. The only allowable protections for these lines are an AIR GAP or an RP ASSEMBLY.
- Chemical tanks.
- Other connections between the POTABLE WATER system and a nonpotable water system such as the GRAY WATER system, laundry system or TECHNICAL WATER system. The only allowable forms of protection for these connections are an AIR GAP or an RP ASSEMBLY.
- BLACK WATER or combined GRAY WATER/BLACK WATER systems. An AIR GAP is the only allowable protection for these connections.
- Any other connection to the POTABLE WATER system where CONTAMINATION or BACKFLOW can occur.

5.7.1.1.4 Log (08) [1 demerit point]

A CROSS-CONNECTION control program must include at a minimum: a complete listing of CROSS-CONNECTIONS and the BACKFLOW prevention method or device for each, so there is a match to the PLUMBING SYSTEM component and location. AIR GAPS must be included in the listing.

AIR GAPS on faucet taps do not need to be included on the CROSS-CONNECTION control program listing.

The program must set a schedule for inspection frequency. Repeat devices such as toilets can be grouped under a single device type.

A log documenting the inspection and maintenance in written or electronic form must be maintained and be available for review during inspections.

5.7.1.2 Device Installation

5.7.1.2.1 Air Gaps and Backflow Prevention Devices (08) [1 demerit point]

AIR GAPS should be used where feasible and where water under pressure is not required.

BACKFLOW PREVENTION DEVICES must be installed when AIR GAPS are impractical or when water under pressure is required.

5.7.1.2.2 2X Diameter (08) [1 demerit point]

AIR GAPS must be at least twice the diameter of the delivery fixture opening and a minimum of 25 millimeters (1 inch).

5.7.1.2.3 Flood-level Rim (08) [1 demerit point]

An ATMOSPHERIC VACUUM BREAKER must be installed at least 150 millimeters (6 inches) above the flood-level rim of the fixtures.

5.7.1.2.4 After Valve (08) [1 demerit point]

An ATMOSPHERIC VACUUM BREAKER must be installed only in the supply line on the discharge side of the last control valve.

5.7.1.2.5 Continuous Pressure (08) [1 demerit point]

A continuous pressure-type BACKFLOW PREVENTION DEVICE must be installed when a valve is located downstream from the BACKFLOW PREVENTION DEVICE.

5.7.1.2.6 Backflow Prevention Devices (08) [1 demerit point]

BACKFLOW PREVENTION DEVICES must be provided on all fixtures using POTABLE WATER and that have submerged inlets.

5.7.1.2.7 Vacuum Toilets (08) [1 demerit point]

A vacuum breaker must be installed on a POTABLE WATER supply that is connected to a vacuum toilet system. An ATMOSPHERIC VACUUM BREAKER must be located on the discharge side of the

last control valve (flushing device).

5.7.1.2.8 *Diversion Valves (08) [1 demerit point]*

Lines to divert POTABLE WATER to other systems by valves or interchangeable pipe fittings must have an AIR GAP after the valve.

5.7.1.2.9 *Location (08) [1 demerit point]*

BACKFLOW PREVENTION DEVICES and AIR GAPS must be accessible for inspection, service, and maintenance.

5.7.1.3 Air Supply Connections

5.7.1.3.1 *Air Supply (08) [1 demerit point]*

A compressed air system that supplies pressurized air to both nonpotable and POTABLE WATER pneumatic tanks must be connected through a press-on (manual) air valve or hose.

5.7.1.3.2 *Separate Compressor [0 demerit points]*

A fixed connection may be used when the air supply is from a separate compressor used exclusively for POTABLE WATER pneumatic tanks.

5.7.2 Backflow Prevention Device Inspection and Testing

5.7.2.1 Maintenance

5.7.2.1.1 *Maintained (08) [1 demerit point]*

BACKFLOW PREVENTION DEVICES must be maintained in good repair.

5.7.2.2 Inspection and Service

5.7.2.2.1 *Schedule (08) [1 demerit point]*

BACKFLOW PREVENTION DEVICES should be periodically inspected and any failed units must be replaced.

5.7.2.2.2 *Test Annually (08) [1 demerit point]*

BACKFLOW PREVENTION DEVICES requiring testing (e.g., reduced pressure BACKFLOW PREVENTION DEVICES and PRESSURE VACUUM breakers must be inspected and tested with a test kit after installation and at least annually). Test results showing the pressure differences on both sides of the valves must be maintained for each device.

5.7.2.2.3 *Records (08) [1 demerit point]*

The inspection and test results for BACKFLOW PREVENTION DEVICES must be retained for at least 12 months and must be available for review during inspections.

5.8 Potable Water Knowledge

5.8.1 Demonstration of Knowledge (44) [2 demerit points]

The person in charge of potable water operations on the vessel must demonstrate to Health Canada – Cruise Ship Inspection Program (CSIP) — during inspections and on request—knowledge of potable water operations. The person in charge must demonstrate this knowledge by compliance with this section of these guidelines or by responding correctly to the inspector's questions as they relate to the specific operation. In addition, the person in charge of potable water operations on the vessel must ensure that employees are properly trained to comply with this section of the guidelines in this manual as it relates to their assigned duties.

6.0 Recreational Water Facilities (RWFs)

This section includes the following subsections:

- 6.0 RWFs
- 6.1 Flow-through SEAWATER RWFs
- 6.2 Recirculating RWFs
- 6.3 WHIRLPOOL SPAS and SPA POOLS
- 6.4 Maintenance and Operating Standards for Combined Facilities
- 6.5 Private Cabin Operations
- 6.6 Individual Hydrotherapy Pools
- 6.7 Safety
- 6.8 Restrictions
- 6.9 Knowledge

6.0 RWFs

6.0.1 Source

6.0.1.1 Potable Water or Seawater (09 C) [3 demerit points]

The water source for all RWFs must be POTABLE WATER or SEAWATER.

6.1 Flow-through Seawater RWFs

6.1.1 Operation

6.1.1.1 At Sea

6.1.1.1.1 12 miles (10) [2 demerit points]

Flow-through SEAWATER supply systems for RWFs must be used only while the vessel is MAKING WAY and at sea beyond 20 kilometers (12 miles) from nearest land.

6.1.1.2 In Port

6.1.1.2.1 Drained or Switched to Recirculation (10) [2 demerit points]

Before arriving to a port or HARBOUR, the RWF must be drained before the vessel reaches the 20-kilometer (12-mile) mark or any point of land-based discharge as noted in section 6.1.1.1.1 and it must remain empty while in port or at anchor.

OR

The RWF SEAWATER filling system must be shut off 20 kilometers (12 miles) before reaching the nearest land or land-based discharge point, and a recirculation system must be used with appropriate filtration and halogenation systems.

6.1.1.2.2

Halogen and pH (09 C) [3 demerit points]

When switching from flow-through operations to recirculation operations, the RWF must be closed until the free residual HALOGEN and PH levels are within the acceptable limits of this manual. The sample must be taken from the body of the RWF, not from the pump room.

While the RWF is closed, batch HALOGEN and PH control chemicals may be used to obtain ADEQUATE free HALOGEN residuals and PH levels in a more timely manner. Sufficient time should be allowed before opening the RWF for use to ensure proper mixing of batch chemicals.

6.2 Recirculating RWFs

(See individual sections for additional requirements for whirlpools and SPA POOLS. See Annex 13.7 for requirements for BABY-ONLY WATER FACILITIES.)

6.2.1 Operation

6.2.1.1 Fill Level and Turnover Rates (10) [2 demerit points]

For RWF with skim gutters, the fill level of the RWF must be to the skim gutter level.

TURNOVER rates: Recirculation systems and EQUIPMENT, including chemical control EQUIPMENT, UV DISINFECTION systems, filters, and pumps, must be designed to maintain ADEQUATE water chemistry control while operating at the following TURNOVER rates:

RECREATIONAL WATER FACILITY	TURNOVER Rate
SWIMMING POOL (CSIP 2005 Construction Guidelines or earlier)	6 hours
SWIMMING POOL (CSIP 2011 Construction Guidelines or later)	4 hours
CHILDREN'S POOL	0.5 hours
WADING POOL	1 hours
WHIRLPOOL SPA	0.5 hours
SPA POOL	2 hours
Interactive RWF or ACTIVITY POOL (< 610 millimeters [24 inches] deep)	1 hours
Interactive RWF or ACTIVITY POOL (> 610 millimeters [24 inches] deep)	2 hours
BABY-ONLY WATER FACILITY	0.5 hours

SPA POOLS that were constructed before June 1, 2005, and which were originally considered SWIMMING POOLS may have a TURNOVER rate not to exceed 6 hours in a 24-hour period. This does not apply to SWIMMING POOLS that have been converted to SPA POOLS.

An RWF slide that is combined with a pool must have a TURNOVER rate that matches the rate for the pool.

6.2.1.2 Filtration Systems

6.2.1.2.1 *Filtered (10) [2 demerit points]*

Recirculated RWF water must be filtered.

6.2.1.2.2 *Filter Backwash and Cleaning (10) [2 demerit points]*

Filter pressure differentials must be monitored. Granular filter media must be backwashed until the water viewed through a sight glass runs clear and at the following frequency:

- WHIRLPOOL SPA and SPA POOL: every 72 hours, or sooner if the WHIRLPOOL SPA is drained.
- BABY-ONLY WATER FACILITY: daily.
- All other RWFs: at a frequency recommended by the manufacturer.

For automatic backwashing systems, an individual must be present in the filter room to ensure that backwashing is repeated as necessary until the water runs clear.

Cartridge filters must be cleaned according to the manufacturer's recommendations.

A written or electronic record of the filter backwashing and cleaning must be available for review during inspections.

6.2.1.2.3 *Granular Filter Inspection, Core Sample Test, and Filter Change (10) [2 demerit points]*

Granular filter media must be examined for channels, mounds, or holes. A core sample of the filter media must be inspected for excessive organic material accumulation using a recommended sedimentation method.

For WHIRLPOOL SPAS and SPA POOLS, inspections and sedimentation tests must be done monthly. For all other RWFs, inspections and sedimentation tests must be conducted quarterly.

Inspection method:

Drain the water from the filter housing and inspect the granular filter for channels, mounds, or holes.

Core sample method:

1. *After inspection, take a sand sample from the filter core and place it in a clear container. A core sample can be taken by inserting a rigid hollow tube or pipe into the filter media.*
2. *Add clean water to the container, cover, and shake.*
3. *Allow the container to rest undisturbed for 30 minutes.*
4. *If, after 30 minutes of settling, a measurable layer of sediment is within or on top of the filter media or fine, colored particles are suspended in the water, the organic loading may be excessive, and media replacement should be considered.*

Granular filter media for WHIRLPOOL SPAS and SPA POOLS must be changed based on the inspection and sedimentation test results or every 12 months, whichever is more frequent. For all other

RWFs, granular filter media must be changed based on the inspection and sedimentation results or per the manufacturer's recommendations, whichever is more frequent.

Results of both the filter inspection and sedimentation test must be recorded.

6.2.1.2.4 Cartridge Filter Inspection and Filter Change (10) [2 demerit points]

Cartridge or canister-type filters must be inspected weekly for WHIRLPOOL SPAS and SPA POOLS. For all other RWFs, cartridge filters must be inspected every 2 weeks, or in accordance with the manufacturer's recommendation, whichever is more frequent.

The filters must be inspected for cracks, breaks, damaged components, and excessive organic accumulation. Cartridge or canister-type filters must be changed based on the inspection results, or as recommended by the manufacturer, whichever is more frequent.

At least one replacement cartridge or canister-type filter must be available.

6.2.1.2.5 Other Filter Media (10) [2 demerit points]

Inspect and change filters based on the manufacturer's recommendations.

6.2.1.2.6 Filter Housing Cleaning and Disinfection (10) [2 demerit points]

The filter housing must be cleaned, rinsed, and disinfected before the new filter media is placed in it. DISINFECTION must be accomplished with an appropriate HALOGEN-based DISINFECTANT. At a minimum, a 50-ppm solution for 1 minute, or equivalent CT VALUE, must be used. Records must be maintained on all inspection and cleaning procedures.

6.2.1.2.7 Hair and Lint Strainer (10) [2 demerit points]

The hair and lint strainer and hair and lint strainer housing on all RWFs must be cleaned, rinsed, and disinfected weekly. DISINFECTION must be accomplished with an appropriate HALOGEN-based DISINFECTANT. At a minimum, a 50-ppm solution for 1 minute, or equivalent CT VALUE, must be used. Records must be maintained on all inspection and cleaning procedures.

6.2.1.2.8 All Filters (10) [2 demerit points]

The manufacturer's maintenance procedures and recommendations for all filters must be maintained on the vessel.

6.2.1.3 Gauges (10) [2 demerit points]

RWF filter pressure gauges, flow meters, and valves must be replaced when they are defective.

6.2.1.4 Manuals (10) [2 demerit points]

The operating manuals for all RWF components such as filters, pumps, halogenation and PH control systems, and UV DISINFECTION systems

must be maintained in a location that is accessible to crew members responsible for the operations and maintenance of these facilities.

6.2.1.5 Bather Loads (10) [2 demerit points]

Documentation must be maintained on the maximum bather load for each RWF. The maximum bather load must be based on the following factor: One person per five gallons per minute of recirculation flow.

6.2.1.6 Water Quality

6.2.1.6.1 Water Chemistry (10) [2 demerit points]

The RWF's flow rates, free and combined HALOGEN levels, PH, total alkalinity, and clarity must be monitored and adjusted as recommended by the manufacturer and to maintain optimum public health protection and water chemistry.

Evaluate bather load and make adjustments to water parameters to maintain optimum water quality.

6.2.1.6.2 Fecal and Vomit Accident (10) [2 demerit points]

A fecal and vomit accident response procedure that meets or exceeds the procedure provided in Annex 13.8 must be available for review during inspections.

6.2.1.6.3 Record of Fecal and Vomit Accidents (10) [2 demerit points]

A written or electronic record must be made of all accidents involving fecal material or vomit. The record must include the name of the RWF, date and time of the accident, type of accident, response steps taken, and free residual HALOGEN level and contact time reached during DISINFECTION. For a fecal accident, the record must also include whether the fecal material was formed or loose.

6.2.2 Halogenation

6.2.2.1 Residual Halogen: Halogen and pH Dosing Systems (10) [2 demerit points]

Automated systems must be installed for HALOGEN-based DISINFECTION and PH control dosing. The amounts injected must be controlled by flow meters or free HALOGEN and PH analyzers.

When conducting manual tests, consideration should be given to the HALOGEN and PH levels in the RWF over the HALOGEN and PH readings from the pump room.

Initial chemistry balance can be achieved by manual dosing methods following events such as fecal or vomit accidents and when changing from flow-through SEAWATER to recirculation mode.

6.2.2.1.1 Residual (9 C) [3 demerit points]

A free residual HALOGEN in the ranges noted in the table below must be maintained in recirculated RWFs.

Recreational Water Facility	Free HALOGEN Residual, mg/L (ppm)
SWIMMING POOL	≥ 1.0 and ≤ 5.0
CHILDREN'S POOL	≥ 1.0 and ≤ 5.0
WADING POOL	≥ 1.0 and ≤ 5.0
Interactive RWF (ACTIVITY POOL)	≥ 2.0 and ≤ 5.0
BABY-ONLY WATER FACILITY	≥ 3.0 and ≤ 10.0 free chlorine ≥ 4.0 and ≤ 10.0 bromine
WHIRLPOOL SPA and SPA POOL	≥ 3.0 and ≤ 10.0 free chlorine ≥ 4.0 and ≤ 10.0 bromine

6.2.2.1.2 **pH (9 C) [3 demerit points]**

The PH level in all RWFs must be maintained between 7.0 and 7.8.

Facilities not maintained within these HALOGEN and PH ranges must be immediately closed.

6.2.2.1.3 **Maintenance (10) [2 demerit points]**

Halogenation and PH control systems must be maintained in good repair and operated in accordance with the manufacturer's recommendations.

6.2.2.2 Residual Halogen and pH Monitoring

6.2.2.2.1 **Test Kit (10) [2 demerit points]**

A test kit must be available for testing water quality parameters such as free and total HALOGEN levels (chlorine and bromine, where applicable), PH, and total alkalinity.

Test kits must be accurate to within 0.2 MG/L (ppm) for HALOGEN and must have a testing range of free residual HALOGEN normally maintained in the RWF. Test kits for PH must be accurate to within 0.2. Ensure that all reagents are not past their expiration dates.

6.2.2.2.2 **Test Kit Maintenance and Verification (10) [2 demerit points]**

Where available, ensure that appropriate secondary standards are onboard for electronic test kits to verify test kit operation.

6.2.2.2.3 **Automated Free Halogen Residual and pH Testing (10) [2 demerit points]**

Install chart recorders or electronic data loggers with security features that record PH and HALOGEN measurements for each individual RWF. The sample line for the analyzer probe (monitoring) must be either directly from the RWF or on the return line from each RWF and before the compensation tank. Install appropriate samples taps for analyzer calibration.

In the event of EQUIPMENT failure, free residual HALOGEN and PH must be measured by a manual test kit at the RWF or return line at least hourly for WHIRLPOOL SPAS, SPA POOLS, CHILDREN'S POOLS, and WADING POOLS and every 4 hours for all other RWFs.

Manual readings must be recorded on a chart or log, retained for at least 12 months, and available for review during inspections.

Repairs on malfunctioning HALOGEN analyzer-chart recorders must be completed within 30 days of EQUIPMENT failure.

Provide an audible alarm in a continuously occupied watch station (e.g., the engine control room) to indicate low and high free HALOGEN and PH readings in each RWF.

6.2.2.2.4 Whirlpool and Spa Pool Probes (10) [2 demerit points]

For WHIRLPOOL SPAS and SPA POOLS, the analyzer probes for dosing and recording systems must be capable of measuring and recording levels up to 10 MG/L (10 ppm).

6.2.2.2.5 Analyzer-chart Recorder (10) [2 demerit points]

The HALOGEN and PH analyzer-chart recorder must be properly maintained and operated in accordance with the manufacturer's instructions.

A manual comparison test must be conducted before opening the RWF to verify calibration for free HALOGEN residual and PH. The analyzer reading must be within 0.2 ppm for free HALOGEN and 0.2 for PH.

For RWFs open longer than 24 hours, a manual comparison test must be conducted every 24 hours.

6.2.2.2.6 Data Logger (10) [2 demerit points]

If an electronic data logger is used in lieu of a chart recorder, it must have certified data security features.

Manual comparison tests for free HALOGEN residual and PH must be conducted before opening the RWF to verify calibration. The analyzer reading must be within 0.2 ppm for free HALOGEN and 0.2 for PH.

For RWFs open longer than 24 hours, a manual comparison test must be conducted every 24 hours.

6.2.2.2.7 Charts (10) [2 demerit points]

HALOGEN analyzer-chart recorder charts must be initialed, dated, and changed daily.

Strip recorder charts must be initialed and dated daily and 24-hour increments must be indicated.

6.2.2.2.8 Logs (10) [2 demerit points]

Logs and charts must contain notations outlining actions taken when the free HALOGEN residual or PH levels are outside of the acceptable ranges in this manual.

Additionally, the records must include any major maintenance work on the filtration and halogenation systems and UV DISINFECTION systems.

A written or electronic log of RWF filter inspection results, granular filter sedimentation test results, backwashing frequency and length of backwashing, and date and time of water dumping

must be available for review during inspections.

6.2.2.2.9 *Retention (10) [2 demerit points]*

Logs and charts must be retained for 12 months and must be available for review during inspections.

6.3 Whirlpool Spas and Spa Pools

6.3.1 Public Operations

6.3.1.1 Filters

6.3.1.1.2 *Replacement (10) [2 demerit points]*

At least one replacement cartridge or canister-type filter must be available.

6.3.1.2 Water Quality

6.3.1.2.1 *Changed (10) [2 demerit points]*

The WHIRLPOOL SPA water, including compensation tank, filter housing, and associated piping, must be changed every 72 hours, provided that the system is operated continuously and that the correct water chemistry levels are maintained during that period, including daily shock halogenation.

SPA POOL water must be changed as often as necessary to maintain proper water chemistry. The water must be changed at least every 30 days.

The date and time of WHIRLPOOL SPA and SPA POOL water changes must be recorded in the log.

6.3.2 Halogenation

6.3.2.1 Residual Halogen

6.3.2.1.1 *Prolonged Maintenance (10) [2 demerit points]*

For facilities undergoing maintenance for longer than 72 hours, the free HALOGEN residual and PH levels must be maintained or the entire system must be drained completely of all water. This includes the WHIRLPOOL SPA and SPA POOL tubs, compensation tanks, filter housings, and all associated piping and blowers. Records must be maintained for the free HALOGEN and PH levels or the complete draining of the system.

6.3.2.1.2 *Shock Halogenation (10) [2 demerit points]*

The free residual HALOGEN must be increased to at least 10.0 MG/L (ppm) and circulated for at least 1 hour every 24 hours.

The free residual HALOGEN must be tested at both the start and completion of shock halogenation.

The water in the entire RWF system must be superhalogenated to 10 ppm to include the WHIRLPOOL SPA/SPA POOL tub, compensation tank, filter housing, and all associated piping before starting the 1-hour timing.

Batch halogenation of the tub and compensation tank may help in reaching the minimum 10 ppm residual quickly.

Facilities filled only with SEAWATER are exempt from this requirement.

6.3.2.1.3 Records (10) [2 demerit points]

A written or electronic record of the date and time of water dumping and shock halogenation (concentration in ppm at the start and completion and time) must be available for review during inspections.

6.3.2.1.4 Retention (10) [2 demerit points]

Records must be retained on the vessel for 12 months.

6.4. Maintenance and Operating Standards for Combined Facilities

6.4.1 Pool with Attached Whirlpool Spa (10) [2 demerit points]

For any pool with an attached WHIRLPOOL SPA where the water, recirculation system EQUIPMENT, or filters are shared with the spa, all elements of the WHIRLPOOL SPA standards must apply to the pool.

6.4.1.2 Fecal Accidents (10) [2 demerit points]

For combined facilities subject to fecal accidents, fecal accident procedures must include all features of these combined facilities.

6.5 Private Cabin Operations

WHIRLPOOL SPAS that are similar in design and construction to public WHIRLPOOL SPAS but which are located for the sole use of an individual cabin or groups of cabins must comply with the public WHIRLPOOL SPA requirements if the WHIRLPOOL SPA has either of the following features:

- *Tub capacity of more than 4 individuals; or*
- *Can be accessed without entering the cabin.*

6.5.1 Maintenance

6.5.1.1 Cleaning (10) [2 demerit points]

Private WHIRLPOOL SPAS located in individual passenger cabins must be cleaned and disinfected, including associated recirculation systems, between occupancies or weekly, whichever is more frequent. DISINFECTION must be accomplished with an appropriate HALOGEN-based DISINFECTANT at 10 ppm for 60 minutes, or an equivalent CT VALUE.

6.5.1.2 Maintenance (10) [2 demerit points]

Manufacturer's operation and maintenance instructions must be available to personnel who service the units.

6.5.1.3 Records (10) [2 demerit points]

A record must be maintained outlining the frequency of cleaning and DISINFECTION. The record must include the type, concentration, and contact time of the DISINFECTANT.

Records must be retained on the vessel for 12 months.

6.6 Individual Hydrotherapy Pools

6.6.1 Maintenance

6.6.1.1 Cleaning (10) [2 demerit points]

Individual hydrotherapy pools must be cleaned and disinfected, including associated recirculation systems, between customers. DISINFECTION must be accomplished with an appropriate HALOGEN-based DISINFECTANT at 10 ppm for 60 minutes, or an equivalent CT VALUE.

6.6.1.2 Maintenance (10) [2 demerit points]

Manufacturer's operation and maintenance instructions must be available to personnel that service the units.

6.6.1.3 Records (10) [2 demerit points]

A record must be maintained outlining the frequency of cleaning and DISINFECTION. The record must include the type, concentration and contact time of the DISINFECTANT.

Records must be retained on the vessel for 12 months.

6.7 Safety

6.7.1 RWFs

6.7.1.1 Signs and Markings

6.7.1.1.1 General RWF Signs (10) [2 demerit points]

Safety signs must be provided for all RWFs, except for BABY-ONLY WATER FACILITIES.

The signs at a minimum must include the following words:

- Do not use these facilities if you are experiencing diarrhea, vomiting, or fever.
- No children in diapers or who are not toilet trained.
- Shower before entering the facility.
- Bather load #.

Pictograms may replace words, as appropriate or available.

For children's RWF signs, include the exact wording "TAKE CHILDREN ON FREQUENT BATHROOM BREAKS" or "TAKE CHILDREN ON FREQUENT TOILET BREAKS."

It is advisable to post additional cautions and concerns on signs.

See section 6.2.1.5 for bather load calculations.

6.7.1.1.2 Depth Markers (10) [2 demerit points]

The depth of each RWF that is deeper than 1 meter (3 feet) must be displayed prominently so that it can be seen from the deck and in the pool. Depth markers should be labeled in both feet and meters. Additionally, depth markers must be installed for every 1 meter (3 feet) change in depth.

6.7.1.1.3

Spas (10) [2 demerit points]

In addition to the safety sign requirements in section 6.7.1.1.1, install a sign at each WHIRLPOOL SPA and SPA POOL entrance listing precautions and risks associated with the use of these facilities.

Include, at a minimum, cautions against use by the following:

- Individuals who are immuno-compromised.
- Individuals on medication or who have underlying medical conditions such as cardiovascular disease, diabetes, or high or low blood pressure.
- Pregnant women, elderly persons, and children.

Additionally, caution against exceeding 15 minutes of exposure.

Vessels can submit existing signs for review by VSP / CSIP.

It is advisable to post additional cautions and concerns on signs.

6.7.1.2 Equipment

6.7.1.2.1

Life Saving (10) [2 demerit points]

A rescue or shepherd's hook and an APPROVED flotation device must be provided at a prominent location (visible from the full perimeter of the pool) at each RWF that has a depth of 1 meter (3 feet) or greater. These devices must be mounted in a manner that allows for easy access during an emergency.

- The pole of the rescue or shepherd's hook must be long enough to reach the center of the deepest portion of the pool from the side plus 2 feet. It must be a light, strong, nontelelescoping material with rounded, nonsharp ends.
- The APPROVED flotation device must include an attached rope that is at least 2/3 of the maximum pool width.

6.7.1.2.2

Antientrapment Drain (09) [2 demerit points]

ANTIENTRAPMENT/ANTIENTANGLEMENT requirements for drain covers and SUCTION FITTINGS in RWFs are shown in Table 6.7.1.2.2 (below). **This does not apply to facilities with zero depth where the drains are not under direct suction.**

VSP and CSIP are aware that the requirements shown in Table 6.7.1.2.2 for existing vessels may not fully meet the letter of the Virginia Graeme Baker Act, but we also recognize the life-safety concerns for rapid dumping of RWFs in conditions of instability at sea. Therefore, it is the owner's decision to meet or exceed the VSP / CSIP requirements.

Testing of manufactured drain covers must be by a nationally or internationally recognized testing laboratory.

The information below must be stamped on each manufactured ANTIENTRAPMENT drain cover:

- Certification standard and year.
- Type of drain use (single or multiple).
- Maximum flow rate (in gallons or liters per minute).

- Type of fitting (suction outlet).
- Life expectancy of cover.
- Mounting orientation (wall, floor, or both).
- Manufacturer's name or trademark.
- Model designation.

The design of custom/shipyard constructed (field fabricated) drain covers and SUCTION FITTINGS must be fully specified by a REGISTERED DESIGN PROFESSIONAL in accordance with ASME A112.19.8-2007. The specifications must fully address cover/grate loadings, durability, hair, finger and limb entrapment issues, cover/grate secondary layer of protection, related sump design, and features specific to the RWF.

A letter from the shipyard must accompany each custom/shipyard constructed (field fabricated) drain cover fitting. At a minimum the letter must specify the shipyard, name of the vessel, specifications and dimensions of the drain cover, as noted above, as well as the exact location of the RWF for which it was designed. The name of and contact information for the REGISTERED DESIGN PROFESSIONAL and signature must be on the letter.

Table 6.7.1.2.2 ANTIENTRAPMENT Requirements for Recreational Water Facilities

Option*	Drainage/Recirculation System	Cover Design	Secondary ANTIENTRAPMENT Requirement**
	GRAVITY ONLY		
1	Multiple drains (2 or more drains greater than 3 feet apart)	Standard design (not compliant with ASME A112.19.8)	Alarm
2	Multiple drains (2 or more drains greater than 3 feet apart)	ASME A112.19.8 compliant cover	None
3	Single unblockable drain (per ASME A112.19.8)	Standard design (not compliant with ASME A112.19.8)	Alarm
4	Single unblockable drain (per ASME A112.19.8)	ASME A112.19.8 compliant cover	None
5	Single BLOCKABLE drain or multiple drains (less than 3 feet apart)	ASME A112.19.8 compliant cover	GDS
	SUCTION FITTING		
6	Multiple drains (2 or more drains per pump with drains greater than 3 feet apart)	ASME A112.19.8 compliant cover	None
7	Single unblockable drain (per ASME A112.19.8-2007)	ASME A112.19.8 compliant cover	SVRS or APS
8	Single BLOCKABLE drain or multiple drains (less than 3 feet apart)	ASME A112.19.8 compliant cover	SVRS or APS

*Options 1 through 5 are for fittings that are not under direct suction. These include both fittings to drain the RWF and fittings used to recirculate the water. Options 6 through 8 are for fittings that are under direct suction. These include fittings to drain the RWF and fittings used to recirculate the water.

****Definitions:**

- Alarm = the alarm must sound in a continuously manned space AND at the RWF. This alarm is for emergency draining.

- GDS (gravity drainage system) = a drainage system that uses a collector tank from which the pump draws water. Water moves from the RWF to the collector tank due to atmospheric pressure, gravity, and the displacement of water by bathers. There is no direct suction at the RWF.
- SVRS (safety vacuum release system) = a system which stops the operation of the pump, reverses the circulation flow, or otherwise provides a vacuum release at a suction outlet when a blockage is detected. System must be tested by an independent third party and found to conform with ASME/ANSI A112.19.17 or ASTM standard F2387.
- APS (automatic pump shut-off system) = a device that detects a blockage and shuts off the pump system. A manual shut-off near the RWF does not qualify as an APS.

6.7.1.2.3 Temperature (10) [2 demerit points]

A temperature-control mechanism to prevent the temperature from exceeding 40°C (104°F) must be provided on WHIRLPOOL SPAS and SPA POOLS.

6.8 Restrictions

6.8.1 Diapers (10) [2 demerit points]

Children in diapers or who are not toilet trained must be prohibited from using any RWF that is not specifically designed and APPROVED for use by children in diapers.

Specifications and requirements for BABY-ONLY WATER FACILITIES can be found in Annex 13.7 of the VSP Ops Manual 2011.

6.9 Recreational Water Facilities Knowledge

6.9.1 Demonstration of Knowledge (44) [2 demerit points]

The person in charge of recreational water facilities operations on the vessel must demonstrate to Health Canada – Cruise Ship Inspection Program (CSIP) — during inspections and on request—knowledge of recreational water facilities operations. The person in charge must demonstrate this knowledge by compliance with this section of these guidelines or by responding correctly to the inspector's questions as they relate to the specific operation. In addition, the person in charge of recreational water facilities operations on the vessel must ensure that employees are properly trained to comply with this section of the guidelines in this manual as it relates to their assigned duties.

7.0 Food Safety

This section includes the following subsections:

- 7.1 Reserved
- 7.2 Personnel
- 7.3 Food
- 7.4 EQUIPMENT and UTENSILS
- 7.5 WAREWASHING
- 7.6 Poisonous and Toxic Materials
- 7.7 Facilities

7.1 Reserved

7.2 Personnel

7.2.1 Food-safety Management

7.2.1.1 Food-safety Knowledge

7.2.1.1.1 Knowledge (13 C) [3 demerit points]

Because of the risks for foodborne illness inherent to the food operation, the **supervisor or** PERSON IN CHARGE of food operations on the vessel must demonstrate to Health Canada - CSIP— during inspections and **on request during the inspection** — knowledge of foodborne disease prevention, application of the Hazard Analysis Critical Control Point principles, and the food-safety guidelines in this manual. The **supervisor or** PERSON IN CHARGE must demonstrate this knowledge

- By compliance with these guidelines,
- By being a domestically or foreign certified food protection manager who has shown proficiency of required information through passing a test that is part of an ACCREDITED PROGRAM, or
- By responding correctly to the inspector's questions as they relate to the specific food operation.

The areas of knowledge must include

- Describing the relation between prevention of foodborne disease and personal hygiene of a FOOD EMPLOYEE.
- Explaining the responsibility of the **supervisor or** PERSON IN CHARGE to prevent TRANSMISSION of foodborne disease by a FOOD EMPLOYEE who has a disease or medical condition that may cause foodborne disease.
- Describing the symptoms associated with diseases that are transmissible through food.
- Explaining the significance of the relation between maintaining the time and temperature of POTENTIALLY HAZARDOUS FOOD **and the prevention of foodborne illness.**
- Explaining the HAZARDS involved in the consumption of raw or undercooked MEAT, POULTRY, eggs, and FISH.
- Stating the required food temperatures and times for safe cooking of POTENTIALLY HAZARDOUS FOOD, including MEAT, POULTRY, eggs, and FISH.
- Stating the required temperatures and times for the safe refrigerated storage, hot holding, cooling, and reheating of POTENTIALLY HAZARDOUS FOOD.
- Describing the relation between prevention of foodborne illness and management and control of the following: cross- CONTAMINATION, hand contact with READY-TO-EAT FOODS, handwashing, and maintaining food operations in a clean condition and in good repair.
- Explaining the relation between food safety and providing EQUIPMENT that is sufficient in number and capacity as well as properly designed, constructed, located, installed, operated, maintained, and cleaned.
- Explaining correct procedures for cleaning and sanitizing UTENSILS and FOOD-CONTACT SURFACES of EQUIPMENT.

- Identifying POISONOUS OR TOXIC MATERIALS on the vessel and the procedures necessary to ensure they are safely stored, dispensed, used, and disposed of according to LAW.
- Identifying critical-control points in the operation from purchasing through service that when not controlled may contribute to the TRANSMISSION of foodborne illness and explaining steps taken to ensure the points are controlled in accordance with the guidelines in this manual.

7.2.1.2 Food-safety Duties

7.2.1.2.1 **Monitoring Duties (13 C) [3 demerit points]**

The **supervisor or** PERSON IN CHARGE of food operations on the vessel must ensure that

- Food operations are not conducted in a room used as living or sleeping quarters.
- Persons unnecessary to the food operation are not allowed in the FOOD PREPARATION, FOOD STORAGE, or WAREWASHING areas. *However, brief visits and tours may be authorized if steps are taken to ensure that exposed food; clean EQUIPMENT, UTENSILS, and LINENS; and unwrapped SINGLE-SERVICE and SINGLE-USE ARTICLES are protected from CONTAMINATION.*
- Employees and other persons such as delivery and maintenance persons and pesticide applicators entering the FOOD PREPARATION, FOOD STORAGE, and WAREWASHING areas comply with the guidelines in this manual.
- FOOD EMPLOYEES are effectively cleaning their hands (by routinely monitoring the employees' handwashing).
- Employees are observing foods as they are received to determine that they are from APPROVED sources, delivered at the required temperatures, protected from CONTAMINATION, unadulterated, and accurately presented (by routinely monitoring the employees' observations and periodically evaluating foods as they are received).
- Employees are properly cooking POTENTIALLY HAZARDOUS FOOD, being particularly careful in cooking foods known to cause severe foodborne illness and death, such as eggs and COMMINUTED MEATS (through daily oversight of the employees' routine monitoring of the cooking temperatures using appropriate TEMPERATURE-MEASURING DEVICES that are properly scaled and calibrated).
- Employees are using proper methods to rapidly cool POTENTIALLY HAZARDOUS FOODS that are not held hot or are not for consumption within 4 hours (through daily oversight of the employees' routine monitoring of food temperatures during cooling).
- CONSUMERS who order raw or partially cooked READY-TO-EAT FOODS of animal origin are informed that the food is not cooked sufficiently to ensure its safety.
- Employees are properly sanitizing cleaned multiuse EQUIPMENT and UTENSILS before they are reused (through routine monitoring of solution temperature and

exposure time for hot water sanitizing, and chemical concentration, PH, temperature, and exposure time for chemical sanitizing).

- CONSUMERS are notified that clean TABLEWARE is to be used when they return to self-service areas such as salad bars and buffets.
- Employees are preventing cross-CONTAMINATION of READY-TO-EAT FOOD with bare hands by properly using suitable UTENSILS such as deli tissue, spatulas, tongs, single-use gloves, or dispensing EQUIPMENT.
- Employees are properly trained in food safety, including food allergy awareness, as it relates to their assigned duties.
- FOOD EMPLOYEES are informed of their responsibility to report to the PERSON IN CHARGE information about their health and activities as they relate to diseases that are transmissible through food.

7.2.2 Employee Health

7.2.2.1 Communicable Diseases and Symptoms

7.2.2.1.1 **Communicable Diseases (11 C) [5 demerit points]**

FOOD EMPLOYEES suspected of, diagnosed with, or exposed to any communicable disease caused by *Salmonella typhi*, *Shigella* spp., *E. coli* O157:H7, hepatitis A virus, norovirus, or other communicable diseases that can be transmitted by food, must be excluded from working in any food or food related areas or operations, including working with exposed food, WAREWASHING, EQUIPMENT, UTENSILS, table LINENS, SINGLE-SERVICE ARTICLES, and SINGLE-USE ARTICLES. The excluded individual must not be allowed to return to the above duties until they are symptom free for a minimum of 48 hours.

7.2.2.1.2 **Other Symptoms (11 C) [5 demerit points]**

FOOD EMPLOYEES who have conditions or symptoms of boils, open sores, infected wounds, diarrhea, jaundice, fever, vomiting, sore throat with fever, or discharges from the nose or mouth must report these conditions or symptoms to the vessel's medical staff and must be restricted from working with exposed food, WAREWASHING, clean EQUIPMENT, UTENSILS, table LINENS, and unwrapped SINGLE-SERVICE and SINGLE-USE ARTICLES.

7.2.2.1.3 **Sneeze/Cough (11 C) [5 demerit points]**

FOOD EMPLOYEES experiencing persistent sneezing, coughing, or a runny nose that causes discharges from the eyes, nose, or mouth may not work with exposed food; WAREWASHING clean EQUIPMENT, UTENSILS, and table LINENS; or unwrapped SINGLE-SERVICE or SINGLE-USE ARTICLES.

7.2.2.1.4 **Restrictions Removal (11 C) [5 demerit points]**

The restriction may be removed when the supervisor or PERSON IN CHARGE of the food operation obtains written approval from the vessel's physician or equivalent medical staff.

7.2.2.1.5 **Record of Restriction and Release (02) [1 demerit point]**

A written or electronic record of both the work restriction and

release from restriction must be maintained onboard the vessel for 12 months for inspection review.

7.2.3 Employee Cleanliness

7.2.3.1 Hands and Arms

7.2.3.1.1 Hands and Arms Clean (12 C) [4 demerit points]

FOOD EMPLOYEES must keep their hands and exposed portions of their arms clean.

7.2.3.1.2 Cleaning Procedures (12 C) [4 demerit points]

FOOD EMPLOYEES must clean their hands and exposed portions of their arms with a cleaning compound in a handwashing sink by vigorously rubbing together the surfaces of their lathered hands and arms for at least 20 seconds and thoroughly rinsing with clean water. Employees must pay particular attention to the areas underneath the fingernails and between the fingers.

7.2.3.1.3 When to Wash Hands (12 C) [4 demerit points]

FOOD EMPLOYEES must clean their hands and exposed portions of their arms immediately before engaging in food preparation, including working with exposed food, clean EQUIPMENT and UTENSILS, and unwrapped SINGLE-SERVICE and SINGLE-USE ARTICLES **and**

- After touching bare human body parts other than clean hands and clean, exposed portions of arms.
- After using the toilet room.
- After coughing, sneezing, using a handkerchief or disposable tissue, using tobacco, eating, or drinking.
- After handling soiled EQUIPMENT or UTENSILS.
- During food preparation (as often as necessary to remove soil and CONTAMINATION and to prevent cross-CONTAMINATION when changing tasks).
- When switching between working with raw food and working with READY-TO-EAT FOOD.
- Before putting on gloves for working with food or clean EQUIPMENT and between glove changes.
- After engaging in other activities that contaminate the hands.

7.2.3.1.4 Hand Antiseptic (14) [1 demerit point]

A HAND ANTISEPTIC, a HAND ANTISEPTIC used as a hand dip, or a HAND ANTISEPTIC soap must comply with applicable formulation and use LAWS under FDA or 21 CFR 170.39, 178, 182, 184, or 186.

7.2.3.1.5 Apply to Clean Hands (12 C) [4 demerit points]

HAND ANTISEPTIC, HAND ANTISEPTIC used as a hand dip, or HAND ANTISEPTIC soap must only be applied to hands that are cleaned as described in section 7.2.3.1.2.

7.2.3.2 Fingernails

7.2.3.2.1 Fingernails (14) [1 demerit point]

FOOD EMPLOYEES must keep their fingernails trimmed, filed, and

maintained so the edges and surfaces are cleanable and not rough.

7.2.3.2.2 Fingernail Polish/Artificial Nails (14) [1 demerit point]

A FOOD EMPLOYEE may not wear fingernail polish or artificial fingernails when preparing exposed food.

7.2.3.3 Jewelry

7.2.3.3.1 Jewelry (14) [1 demerit point]

While preparing food, FOOD EMPLOYEES, including bartenders, may not wear jewelry on their arms and hands. *FOOD EMPLOYEES may wear a plain ring such as a SMOOTH simple wedding band.*

7.2.3.4 Food Service Uniform or Apron

7.2.3.4.1 Uniform or Apron (14) [1 demerit point]

FOOD EMPLOYEES must wear a clean uniform or apron to prevent CONTAMINATION of food, EQUIPMENT, UTENSILS, LINENS, and SINGLE-SERVICE and SINGLE-USE ARTICLES.

7.2.4 Hygienic Practices

7.2.4.1 Eating, Drinking, or Using Tobacco

7.2.4.1.1 Eating, Drinking, and Using Tobacco (12 C) [4 demerit points]

An employee must eat, drink, or use any form of tobacco only in designated areas where the CONTAMINATION of exposed food; clean EQUIPMENT, UTENSILS, and table LINENS; unwrapped SINGLE-SERVICE and SINGLE-USE ARTICLES; or other items needing protection cannot occur.

7.2.4.2 Hair Restraints

7.2.4.2.1 Hair Restraints (14) [1 demerit point]

FOOD EMPLOYEES must wear hair restraints—such as hats, hair coverings or nets, beard restraints—and clothing that covers body hair. These items must be designed and worn to effectively keep their hair from contacting exposed food; clean EQUIPMENT, UTENSILS, and LINENS; and unwrapped SINGLE-SERVICE and SINGLE-USE ARTICLES.

This section does not apply to FOOD EMPLOYEES such as counter staff who serve only BEVERAGES and wrapped or PACKAGED foods, hostesses, and wait staff if they present a minimal risk for contaminating exposed food; clean EQUIPMENT, UTENSILS, and LINENS; and unwrapped SINGLE-SERVICE and SINGLE-USE ARTICLES.

7.3 Food

7.3.1 Food Condition

7.3.1.1 Safe and Unadulterated

7.3.1.1.1 Sound Condition (15 C) [5 demerit points]

Food must be safe and unadulterated.

7.3.2 Food Sources

7.3.2.1 Lawful Sourcing

7.3.2.1.1 Comply with Law (15 C) [5 demerit points]

Food must be obtained from sources that comply with applicable local, state, federal, or country of origin's statutes, regulations, and ordinances.

7.3.2.1.2 Food from Private Home (15 C) [5 demerit points]

Food prepared in a private home may not be used or offered for human consumption on a vessel.

7.3.2.1.3 Fish for Undercooked Consumption

FISH—other than MOLLUSCAN SHELLFISH—that are intended for consumption in their raw form may be served if they are obtained from a supplier that freezes the FISH to destroy parasites, or if they are frozen on the vessel and records are retained.

7.3.2.1.4 Steaks (15 C) [5 demerit points]

WHOLE-MUSCLE, INTACT BEEF steaks that are intended for consumption in an undercooked form without a CONSUMER advisory must be

- Obtained from a FOOD-PROCESSING PLANT that packages the steaks and labels them to indicate they meet the definition of WHOLE-MUSCLE, INTACT BEEF; **or**
- If individually cut on a vessel, cut from WHOLE-MUSCLE, INTACT BEEF that is labeled by a FOOD-PROCESSING PLANT to indicate the beef meets the definition of WHOLE-MUSCLE, INTACT BEEF, and prepared so they remain intact.

7.3.2.1.5 Hermetically Sealed Container (15 C) [5 demerit points]

Food in a HERMETICALLY SEALED CONTAINER must be obtained from a FOOD-PROCESSING PLANT that is regulated by the food regulatory agency that has jurisdiction over the plant.

7.3.2.1.6 Milk (15 C) [5 demerit points]

Fluid milk and milk products by **U.S. suppliers** must be obtained from sources that comply with GRADE A STANDARDS as specified in **LAW**. **Milk received in interstate commerce must be from sources listed in the FDA Interstate Milk Suppliers List. Non-U.S. sourced fluid milk and milk products must be obtained from sources that meet or exceed the standards of the health authorities from the source country.** In Canada, all milk and dairy products are regulated by Division 8 of the *Food and Drugs*

Regulation; in accordance to the *Food and Drug Regulations B.08.002.2*, milk (defined as a dairy product) must be pasteurized in order to be sold in Canada.

7.3.2.1.7 Fish and Molluscan Shellfish Sources (15 C) [5 demerit points]

FISH that are received for service must be commercially and legally caught or harvested or otherwise APPROVED for service by CSIP / VSP through an APPROVED VARIANCE.

MOLLUSCAN SHELLFISH that are recreationally caught may not be received for service.

MOLLUSCAN SHELLFISH must be obtained from sources according to LAW and the requirements specified in the FDA National Shellfish Sanitation Program *Guide for the Control of MOLLUSCAN SHELLFISH*, or equivalent standards. MOLLUSCAN SHELLFISH received in interstate commerce must be from sources listed in the FDA Interstate Certified Shellfish Shippers List or equivalent foreign certified shellfish listing.

7.3.2.1.8 Wild Mushrooms (15 C) [5 demerit points]

Mushroom species picked in the wild must be obtained from sources where each mushroom is individually inspected and found to be safe by an APPROVED mushroom identification expert. This requirement does not apply to:

- Cultivated wild mushroom species that are grown, harvested, and processed in an operation that is regulated by the food regulatory agency that has jurisdiction over the operation.
- Wild mushroom species if they are in PACKAGED form and are the product of a FOOD-PROCESSING PLANT that is regulated by the food regulatory agency that has jurisdiction over the plant.

7.3.2.1.9 Game Animals (15 C) [5 demerit points]

If GAME ANIMALS are received for sale or service, they must be

- Commercially raised for food and raised, slaughtered, and processed under LAW; or
- Under a voluntary inspection program administered by the USDA for GAME ANIMALS such as exotic animals (reindeer, elk, deer, antelope, water buffalo, or bison) that are inspected and APPROVED in accordance with 9 CFR 352 (Voluntary Exotic Animal Program) or rabbits that are inspected and certified in accordance with 9 CFR 354 (Rabbit Inspection Program); or
- Under an equivalent regulatory program specifically for GAME ANIMALS. The packaging must also be stamped/labeled by the REGULATORY AUTHORITY.

A GAME ANIMAL may not be received for service if it is a species of wildlife listed in 50 CFR 17 Endangered and Threatened Wildlife and Plants.

7.3.2.2 Receiving Condition

7.3.2.2.1 **Receiving Temperatures (16 C) [5 demerit points]**

Receiving temperatures must be as follows:

- Refrigerated, POTENTIALLY HAZARDOUS FOOD must be at a temperature of 5°C (41°F) or below when received.
- *If a temperature other than 5°C (41°F) for a POTENTIALLY HAZARDOUS FOOD is specified in LAW governing its distribution, such as LAWS governing milk, MOLLUSCAN SHELLFISH, and shell eggs, the food may be received at the specified temperature.*
- POTENTIALLY HAZARDOUS FOOD that is cooked and received hot must be at a temperature of 57°C (135°F) or above. .
- A food that is labeled frozen and shipped frozen by a FOOD-PROCESSING PLANT must be received frozen.
- Upon receipt, POTENTIALLY HAZARDOUS FOOD must be free of evidence of previous temperature abuse.

7.3.2.2.2 **Food Additives (15 C) [5 demerit points]**

Food may not contain unapproved food ADDITIVES or ADDITIVES that exceed amounts specified in LAW, as specified in the current version of the FDA Food Code, including annexes.

7.3.2.2.3 **Shell Eggs (15 C) [5 demerit points]**

Shell eggs must be received clean and sound and may not exceed the restricted egg tolerances specified in LAW, as specified in the current version of the FDA Food Code, including annexes.

7.3.2.2.4 **Egg and Milk Products (15 C) [5 demerit points]**

Eggs and milk products must be received as follows:

- Liquid, frozen, and dry eggs and egg products must be obtained pasteurized.
- Fluid and dry milk and milk products complying with GRADE A STANDARDS as specified in LAW must be obtained pasteurized.
- Frozen milk products, such as ice cream, must be obtained pasteurized as specified in 21 CFR 135 Frozen Desserts.
- Cheese must be obtained pasteurized unless alternative procedures to pasteurization are specified in the CFR, such as 21 CFR 133 Cheeses and Related Cheese Products, for curing certain cheese varieties.

7.3.2.2.5 **Package Integrity (15 C) [5 demerit points]**

Food packages must be in good condition and protect the integrity of the contents so that the food is not exposed to adulteration or potential contaminants. Canned goods with dents on end or side SEAMS may not be used.

7.3.2.2.6 **Ice (15 C) [5 demerit points]**

Ice for use as a food or a cooling medium must be made from POTABLE WATER.

7.3.2.2.7 **Shucked Shellfish (15 C) [5 demerit points]**

Raw SHUCKED SHELLFISH must be obtained in nonreturnable packages that bear a legible label as specified in the National Shellfish Sanitation Program *Guide for the Control of MOLLUSCAN SHELLFISH*.

7.3.2.2.8 Shellstock Shellfish (15 C) [5 demerit points]

SHELLSTOCK must be obtained in containers bearing legible source identification tags or labels that are affixed by the harvester and each dealer that depurates, ships, or reships the SHELLSTOCK, as specified in the National Shellfish Sanitation Program *Guide for the Control of MOLLUSCAN SHELLFISH*.

7.3.2.2.9 Shellstock Condition (19) [2 demerit points]

SHELLSTOCK must be reasonably free of mud, dead shellfish, and shellfish with broken shells when received by a vessel. Dead shellfish or SHELLSTOCK with badly broken shells must be discarded.

7.3.2.3 Maintaining Molluscan Shellfish Identification

7.3.2.3.1 Shucked Identification (15 C) [5 demerit points]

Shucked MOLLUSCAN SHELLFISH may not be removed from the container in which they are received other than immediately before preparation for service.

7.3.2.3.2 Shellstock Identification (15 C) [5 demerit points]

SHELLSTOCK shellfish tags must

- Remain attached to the container in which the SHELLSTOCK are received until the container is empty.
- Be maintained by retaining SHELLSTOCK tags or labels for 90 calendar days from the date the container is emptied by using an APPROVED record-keeping system that keeps the tags or labels in chronologic order correlated to the date when the SHELLSTOCK are served. The date when the last SHELLSTOCK from the container is served must be recorded on the tag or label.

7.3.3 Food Protection

7.3.3.1 Employee Contamination

7.3.3.1.1 Wash Hands (12 C) [4 demerit points]

FOOD EMPLOYEES must wash their hands.

7.3.3.1.2 RTE Food – Hand Contact Prohibited (12 C) [4 demerit points]

Except when washing fruits and vegetables or when otherwise APPROVED, FOOD EMPLOYEES may not contact exposed, READY-TO-EAT FOOD with their bare hands and they must use suitable UTENSILS such as deli tissue, spatulas, tongs, single-use gloves, or dispensing EQUIPMENT.

7.3.3.1.3 Not RTE Food – Minimize Contact (19) [2 demerit points]

FOOD EMPLOYEES must minimize bare hand and arm contact with exposed food that is not in a READY-TO-EAT form.

7.3.3.1.4 Tasting (12 C) [4 demerit points]

A FOOD EMPLOYEE must not use the same UTENSIL more than once to taste food that is to be served.

7.3.3.2 Food and Ingredient Contamination

7.3.3.2.1 Cross-contamination (18 C) [3 demerit points]

Food must be protected from cross-CONTAMINATION or other sources of CONTAMINATION by the following methods:

- Physically separating raw animal foods during storage, preparation, holding, and display from raw READY-TO-EAT FOOD (including other raw animal food such as FISH for sushi or MOLLUSCAN SHELLFISH, or other raw READY-TO-EAT FOOD such as vegetables, and cooked READY-TO-EAT FOOD) so that products do not physically touch and so that one product does not drip into another.
- Separating types of raw animal foods from each other such as beef, FISH, lamb, pork, and POULTRY—except when combined as ingredients—during storage, preparation, holding, and display by using separate EQUIPMENT for each type, or by arranging each type of food in EQUIPMENT so that cross-CONTAMINATION of one type with another is prevented, or by preparing each type of food at different times or in separate areas.

Frozen, commercially processed and PACKAGED raw animal food may be stored or displayed with or above frozen, commercially processed and PACKAGED, READY-TO-EAT FOOD.

- Cleaning and sanitizing EQUIPMENT and UTENSILS.
- Storing the food in packages, covered containers, or wrappings.
- Cleaning visible soil on HERMETICALLY SEALED CONTAINERS of food before opening.
- Protecting food containers that are received PACKAGED together in a case or overwrap from cuts when the case or overwrap is opened.
- Separating damaged, spoiled, or recalled food being held on the vessel.
- Separating unwashed fruits and vegetables from READY-TO-EAT FOOD.

Storage exceptions: storing the food in packages, covered containers, or wrappings does not apply to

- **Whole, uncut, raw fruits and vegetables and nuts in the shell that require peeling or hulling before consumption.**
- **PRIMAL CUTS, quarters, or sides of raw MEAT or slab bacon that are hung on clean, sanitized hooks or**

- placed on clean, sanitized racks.*
- Whole, uncut, processed MEATS such as country hams, and smoked or cured sausages that are placed on clean, sanitized racks.*
- Food being cooled.*
- SHELLSTOCK.*

7.3.3.2.2 Container Identity (19) [2 demerit points]

Containers holding food or food ingredients that are removed from their original packages for use on the vessel, such as cooking oils, flour, herbs, potato flakes, salt, spices, and sugar must be identified with the common name of the food.

Containers holding food that can be readily and unmistakably recognized such as dry pasta need not be identified. Ingredients located at active cooking or preparation stations need not be identified.

7.3.3.2.3 Pasteurized Eggs (18 C) [3 demerit points]

Pasteurized eggs or egg products must be substituted for raw shell eggs in the preparation of foods such as Caesar salad, hollandaise or béarnaise sauce mayonnaise, eggnog, ice cream, and egg-fortified BEVERAGES or dessert items that are not cooked.

7.3.3.2.4 Wash Fruits/Vegetables (19) [2 demerit points]

Raw fruits and vegetables must be thoroughly rinsed in water to remove soil and other contaminants before being cut, combined with other ingredients, cooked, served, or offered for human consumption in READY-TO-EAT form.

Fruits and vegetables may be washed by using chemicals specified under 21 CFR 173.315 (see VSP Ops Manual 2011 - Annex 13.10).

7.3.3.3 Ice as Coolant

7.3.3.3.1 Ice Used as a Coolant (19) [2 demerit points]

After use as a medium for cooling the exterior surfaces of food such as melons or FISH, PACKAGED foods such as canned BEVERAGES, or cooling coils and tubes of EQUIPMENT, ice may not be used as food.

7.3.3.3.2 Coolant (19) [2 demerit points]

PACKAGED food may not be stored in direct contact with ice or water if the food is subject to the entry of water because of the nature of its packaging, wrapping, or container, or its positioning in the ice or water.

7.3.3.3.3 Undrained Ice (19) [2 demerit points]

Except as specified in 7.3.3.3.4-7.3.3.3.6, unpackaged food may not be stored in direct contact with undrained ice.

7.3.3.3.4 Raw Fruit/Vegetables

Whole, raw fruits or vegetables; cut, raw vegetables such as celery, carrot sticks, or cut potatoes; and tofu may be

immersed in ice or water.

7.3.3.3.5 Raw Chicken/Fish [0 demerit point]

Raw chicken and raw FISH that are received immersed in ice in shipping containers may remain in that condition while in storage awaiting preparation, display, or service.

7.3.3.3.6 Ongoing Meal Service [0 demerit point]

Other unpackaged foods in a raw, cooked, or partially cooked state may be immersed in ice as part of an ongoing meal service process, such as liquid egg product, individual eggs, pasta, and reconstituted powdered mixes.

7.3.3.4 Equipment, Utensils, and Linens

7.3.3.4.1 Cleaned/Sanitized (26 C) [3 demerit points]

Food must only contact surfaces of EQUIPMENT and UTENSILS that are cleaned and sanitized.

7.3.3.4.2 Storage During Use (19) [2 demerit points]

During pauses in food preparation or dispensing, food preparation and dispensing UTENSILS must be stored as follows:

- In the food with their handles above the top of the food and the container;
- In food that is not POTENTIALLY HAZARDOUS with their handles above the top of the food within containers or EQUIPMENT that can be closed, such as bins of sugar, flour, or cinnamon;
- On a clean portion of the FOOD PREPARATION table or cooking EQUIPMENT only if the in-use UTENSIL and the FOOD-CONTACT SURFACE of the FOOD PREPARATION table or cooking EQUIPMENT are cleaned and sanitized at least every 4 hours;
- In running water of sufficient velocity to flush particulates to the drain (if used with moist food such as ice cream or mashed potatoes);
- In a clean, protected location (if the UTENSILS, such as ice scoops, are used only with a food that is not POTENTIALLY HAZARDOUS); or
- In a container of water (if the water is maintained at a temperature of at least 57°C [135°F] and the container is frequently cleaned and sanitized).

7.3.3.4.3 Linen/Napkins (19) [2 demerit points]

LINENS and napkins may not be used in contact with food unless they are used to line a container for the service of foods and the LINENS and napkins are replaced each time the container is refilled for a new CONSUMER.

7.3.3.4.4 Wiping Cloths (25) [1 demerit point]

Wiping cloths must be restricted to the following:

- Cloths used for wiping food spills must be used for no other purpose.
- Cloths used for wiping food spills must be dry and used for wiping food spills from TABLEWARE and SINGLE-

SERVICE ARTICLES OR wet and cleaned, stored in a chemical SANITIZER, and used for wiping spills from food-contact and NON-FOOD-CONTACT SURFACES of EQUIPMENT.

- Dry or wet cloths used with raw animal foods must be kept separate from cloths used for other purposes. Wet cloths used with raw animal foods must be kept in a separate sanitizing solution.
- Wet wiping cloths used with a freshly made sanitizing solution and dry wiping cloths must be free of food debris and visible soil.

7.3.3.4.5 Glove Use (19) [2 demerit points]

Gloves must be used as follows:

- Single-use gloves must be used for only one task such as working with READY-TO-EAT FOOD or with raw animal food, used for no other purpose, and discarded when damaged or soiled or when interruptions occur in the operation.
- Slash-resistant gloves used to protect hands during operations requiring cutting must be used in direct contact only with food that is subsequently cooked (such as frozen food or a PRIMAL CUT OF MEAT).
- Slash-resistant gloves may be used with READY-TO-EAT FOOD that will not be subsequently cooked if the slash-resistant gloves have a SMOOTH, durable, and nonabsorbent outer surface OR if the slash-resistant gloves are covered with a SMOOTH, durable, nonabsorbent glove or a single-use glove.
- Cloth gloves may not be used in direct contact with food unless the food is subsequently cooked (such as frozen food or a PRIMAL CUT OF MEAT).

7.3.3.4.6 Second Portions and Refills (19) [2 demerit points]

Procedures for second portions and refills must be as follows:

- Except for refilling a CONSUMER'S drinking cup or container without contact between the pouring UTENSIL and the lip-contact area of the drinking cup or container, FOOD EMPLOYEES may not use TABLEWARE soiled by the CONSUMER—including SINGLE-SERVICE ARTICLES—to provide second portions or refills.
- Except as specified in the bullet below, self-service CONSUMERS may not be allowed to use soiled TABLEWARE—including SINGLE-SERVICE ARTICLES—to obtain additional food from the display and serving EQUIPMENT.
- Drinking cups and containers may be reused by self-service CONSUMERS if refilling is a CONTAMINATION-free process.

7.3.3.5 Food Storage and Preparation

7.3.3.5.1 Storage Protection (19) [2 demerit points]

Food must be protected from CONTAMINATION by storing the food as follows:

- Covered or otherwise protected;
- In a clean, dry location;
- Where it is not exposed to splash, dust, or other

CONTAMINATION; and

- At least 15 centimeters (6 inches) above the deck.

7.3.3.5.2 Prohibited Storage (19) [2 demerit points]

Food may not be stored as follows:

- In locker rooms.
- In toilet rooms.
- In dressing rooms.
- In garbage rooms;
- In mechanical rooms;
- Under sewer lines that are not continuously sleeve welded.
- Under leaking water lines, including leaking automatic fire sprinkler heads, or under lines on which water has condensed.
- Under open stairwells.
- Under other sources of CONTAMINATION from non-food items such as ice blocks, ice carvings, and flowers.
- In areas not finished in accordance with 7.7.4 and 7.7.5 for FOOD STORAGE AREAS.

7.3.3.5.3 PHF Packages in Vending Machines (19) [2 demerit points]

POTENTIALLY HAZARDOUS FOOD dispensed through a vending machine must be in the package in which it was placed in the galley or FOOD-PROCESSING PLANT at which it was prepared.

7.3.3.5.4 Preparation (19) [2 demerit points]

During preparation, unpackaged food must be protected from environmental sources of CONTAMINATION such as rain.

7.3.3.6 Food Display and Service

7.3.3.6.1 Display Preparation (19) [2 demerit points]

Food on display must be protected from CONTAMINATION by the use of packaging; counter, service line, or salad bar food guards; display cases; self-closing hinged lids; or other effective means. Install side protection for sneeze guards if the distance between exposed food and where CONSUMERS are expected to stand is less than 1 meter (40 inches).

7.3.3.6.2 Condiments (19) [2 demerit points]

Condiments must be protected from CONTAMINATION by being kept in one of the following:

- Dispensers designed to provide protection.
- Protected food displays provided with the proper UTENSILS.
- Original containers designed for dispensing.
- Individual packages or portions.

Condiments at a vending machine location must be in individual packages or provided in dispensers that are filled at an APPROVED location, such as the galley that provides food to the vending machine location, a FOOD-PROCESSING PLANT, or a properly equipped facility located on the site of the vending machine location.

7.3.3.6.3 Self Service (19) [2 demerit points]

CONSUMER self-service operations, such as salad bars and buffets, for unpackaged READY-TO-EAT FOODS must be

- Provided with suitable UTENSILS or effective dispensing methods that protect the food from CONTAMINATION.
- Monitored by FOOD EMPLOYEES trained in safe operating procedures.

Where there is self service of scooped frozen dessert, service must be out of shallow pans no deeper than 4 inches (100 millimeters) and no longer than 12 inches (300 millimeters).

7.3.3.6.4 Utensils, Consumer Self-service

7.3.3.6.4.1 Dispensing Utensil (19) [2 demerit points]

A food-dispensing UTENSIL must be available for each container of food displayed at a CONSUMER self-service unit such as a buffet or salad bar.

7.3.3.6.4.2 Utensil Protected (19) [2 demerit points]

The food contact portion of each self-service food dispensing UTENSIL must be covered or located beneath shielding during service.

Dishware, glassware, and UTENSILS out for service must be inverted or covered.

7.3.3.6.5 Food Reservice (15 C) [5 demerit points]

After being served and in the possession of a CONSUMER or being placed on a buffet service line, food that is unused or returned by the CONSUMER may not be offered as food for human consumption.

Exceptions:

- A container of food that is not POTENTIALLY HAZARDOUS may be transferred from one CONSUMER to another if the food is dispensed so that it is protected from CONTAMINATION and the container is closed between uses (such as a narrow-neck bottle containing catsup, steak sauce, or wine) OR the food (such as crackers, salt, or pepper) is in an unopened original package and is maintained in sound condition.
- Reservice for foods served to passengers from a fully enclosed display case and under strict employee monitoring, strict temperature control of hot/cold POTENTIALLY HAZARDOUS FOODS, proper cooling and reheating of hot-held POTENTIALLY HAZARDOUS FOODS, and complete protection from any other CONTAMINATION sources, including pests.

7.3.3.7 Other Contamination

7.3.3.7.1 Other Contaminants (19) [2 demerit points]

Food must be protected from CONTAMINATION that may result from a physical, chemical, biological origin.

7.3.4 Pathogen Destruction

7.3.4.1 Cooking Temperatures/Times

7.3.4.1.1 Cooking (16 C) [5 demerit points]

Raw animal foods such as eggs, FISH, MEAT, and POULTRY—and foods containing these raw animal foods—must be cooked to heat all parts of the food to a temperature and for a time that complies with one of the following methods based on the food being cooked:

- **63°C (145°F) or above** for 15 seconds for raw shell eggs that are broken and prepared in response to CONSUMERS' orders and for immediate service; and for FISH, MEAT, and pork, including GAME ANIMALS commercially raised for food and GAME ANIMALS under a voluntary inspection program.
- **68°C (155°F) or above** for 15 seconds or equivalent temperature-time combination for RATITES, MECHANICALLY TENDERIZED and INJECTED MEATS, and raw eggs that are not prepared for immediate service; and for the following if they are COMMINUTED: FISH, MEAT, GAME ANIMALS commercially raised for food, and GAME ANIMALS under a voluntary inspection program.
- **74°C (165°F) or above** for 15 seconds for POULTRY, wild GAME ANIMALS not specified in above bullet for 68°C (155°F); stuffed FISH, MEAT, pasta, POULTRY, or RATITES; or stuffing containing FISH, MEAT, POULTRY, or RATITES.
- Whole beef roasts, corned beef roasts, pork roasts, and cured pork roasts such as ham, must be cooked as noted in sections a and b below.

In an oven preheated to the temperature specified for the roast's weight (see table below) and held at that temperature AND

Oven Type	Roast Weight Less Than 4.5 kg (10 lbs)	Roast Weight 4.5 kg (10 lbs) or More
Still dry	Preheat to 177°C (350°F) or more	Preheat to 121°C (250°F) or more
Convection	Preheat to 163°C (325°F) or more	Preheat to 121°C (250°F) or more
High humidity*	Preheat to 121°C (250°F)	Preheat to 121°C (250°F)

*Relative humidity greater than 90% for at least 1 hour as measured in the cooking chamber or exit of the oven; or in a moisture-impermeable bag that provides 100% humidity.

All parts of the food heated to a temperature and for the holding time which corresponds to that temperature (see chart below):

Temperature	Time*
54.4°C (130°F)	112 minutes
55.0°C (131°F)	89 minutes
56.1°C (133°F)	56 minutes
57.2°C (135°F)	36 minutes
57.8°C (136°F)	28 minutes
58.9°C (138°F)	18 minutes
60.0°C (140°F)	12 minutes
61.1°C (142°F)	8 minutes
62.2°C (144°F)	5 minutes
62.8°C (145°F)	4 minutes
63.9°C (147°F)	134 seconds
65.0°C (149°F)	85 seconds
66.1°C (151°F)	54 seconds
67.2°C (153°F)	34 seconds
68.3°C (155°F)	22 seconds
69.4°C (157°F)	14 seconds
70.0°C (158°F)	0 seconds

*Holding time may include postoven heat rise.

Extracted from *Food Code, Recommendations of the United States Public Health Service, 2009.*

- *A raw or undercooked WHOLE-MUSCLE, INTACT BEEF steak may be served or offered for sale in a READY-TO-EAT form if the steak is labeled to indicate that it meets the definition of “WHOLE-MUSCLE, INTACT BEEF” and the steak is cooked on both the top and bottom to a surface temperature of 63°C (145°F) or above and a cooked color change is achieved on all external surfaces.*
- *A raw animal food (such as raw FISH, raw-marinated FISH, raw MOLLUSCAN SHELLFISH, or steak tartare) or a partially cooked food (such as lightly cooked FISH, soft-cooked eggs, or rare MEAT other than WHOLE-MUSCLE, INTACT BEEF steaks) may be served or offered for sale in a READY-TO-EAT form if the CONSUMER is informed by the written CONSUMER advisory or if Health Canada – CSIP or VSP grants a VARIANCE from the cooking recommendations based on a HACCP PLAN submitted by the vessel and APPROVED. The HACCP PLAN must document scientific data or other information showing that a lesser time and temperature regimen results in a safe food. The HACCP PLAN must verify that EQUIPMENT and procedures for food preparation and training of FOOD EMPLOYEES meet the conditions of the VARIANCE.*

7.3.4.1.2

Microwave (16 C) [5 demerit points]

Raw animal foods cooked in a microwave oven must be

- Rotated or stirred throughout or midway during cooking to compensate for uneven distribution of heat.
- Covered to retain surface moisture.
- Heated to a temperature of at least 74°C (165°F) in all

parts of the food.

- Allowed to stand covered for 2 minutes after cooking to obtain temperature equilibrium.

7.3.4.1.3 Fruits/Vegetables (17) [2 demerit points]

Fruits and vegetables cooked for hot holding must be cooked to a temperature of 57°C (135°F).

7.3.4.2 Parasite Destruction

7.3.4.2.1 Parasite Destruction (16 C) [5 demerit points]

Before service in READY-TO-EAT form, raw, raw-marinated, partially cooked, or marinated-partially cooked FISH and fishery products other than MOLLUSCAN SHELLFISH must be frozen throughout to a temperature of -20°C (-4°F) or below for 168 hours (7 days) in a freezer or to -35°C (-31°F) or below for 15 hours in a BLAST CHILLER.

These FISH may be served in a raw, raw-marinated, or partially cooked READY-TO-EAT form without freezing if the

- *FISH are tuna of the species Thunnus alalunga, T. albacares (yellowfin tuna), T. atlanticus, T. maccoyii (bluefin tuna, southern), T. obesus (bigeye tuna), or T. thynnus (bluefin tuna, northern) OR*
- *Aquacultured FISH, such as salmon, are*
 - *raised in open water, net-pens, or land-based operations such as ponds or tanks and*
 - *fed formulated feed (such as pellets) that contains no live parasites infective to the aquacultured FISH, or FISH eggs that have been removed from the skein and rinsed.*

If foods, such as gravlax, ceviche/seviche, FISH carpaccio, or sashimi, are prepared in a FOOD-PROCESSING PLANT and certified as parasite free, they may be served raw, raw-marinated, or partially cooked READY-TO-EAT without freezing the product onboard the vessel.

7.3.4.2.2 Records (17) [2 demerit points]

If raw, raw-marinated, partially cooked, or marinated partially cooked FISH are served in READY-TO-EAT form,

- The supervisor or PERSON IN CHARGE must record the freezing temperature and time to which the FISH are subjected and must retain the records on the vessel for 90 calendar days beyond the time of service or sale of the FISH; OR
- If the FISH are frozen by a supplier, a written letter from the supplier must specify the FISH species involved and both the temperature to which the FISH was frozen and the total time period at that temperature. If the supplier provides any of the same FISH species to the vessel in a fresh state, the outer packaging must designate which is the parasite-free FISH.

FISH that are exempt from freezing requirements based on section 7.3.4.2.1 must have a letter stating both the species of FISH and the conditions in which they were raised and fed.

7.3.4.3 Reheating

7.3.4.3.1 **Immediate Service [0 demerit point]**

Cooked and refrigerated food prepared for immediate service in response to an individual CONSUMER order (such as a roast beef sandwich au jus) may be served at any temperature.

7.3.4.3.2 **74°C/165°F (16 C) [5 demerit points]**

POTENTIALLY HAZARDOUS FOOD that is cooked, cooled, and reheated for hot holding must be reheated so that all parts of the food reach a temperature of at least 74°C (165°F) for 15 seconds.

7.3.4.3.3 **Microwave Heating (16 C) [5 demerit points]**

If reheated in a microwave oven for hot holding, POTENTIALLY HAZARDOUS FOOD must be reheated so that all parts of the food reach a temperature of at least 74°C (165°F) and the food is rotated or stirred, covered, and allowed to stand covered for 2 minutes after reheating.

7.3.4.3.4 **Commercial Products (17) [2 demerit points]**

READY-TO-EAT POTENTIALLY HAZARDOUS FOOD taken from a commercially processed, HERMETICALLY SEALED CONTAINER, or from an intact package from a food processing plant that is inspected by the food REGULATORY AUTHORITY that has jurisdiction over the plant, must be heated to a temperature of at least 57°C (135°F) for hot holding.

7.3.4.3.5 **Rapid Reheat (16 C) [5 demerit points]**

Reheating for hot holding must be done rapidly. The time the food is between 5°C (41°F) and 74°C (165°F) may not exceed 2 hours.

7.3.4.3.6 **Reheat Roast Beef [0 demerit point]**

Remaining unsliced portions of roasts of beef cooked on the vessel may be reheated for hot holding using the oven parameters and minimum time and temperature conditions used in the original cooking process.

7.3.5 Food Holding Temperatures and Times

7.3.5.1 Frozen, Slacking, and Thawing Procedures

7.3.5.1.1 **Store Frozen Food Frozen (17) [2 demerit points]**

Stored frozen foods must be maintained frozen.

7.3.5.1.2 **Slacking (17) [2 demerit points]**

Frozen POTENTIALLY HAZARDOUS FOOD that is SLACKED to moderate the temperature must be held

- Under refrigeration that maintains the food temperature at 5°C (41°F) or less; or

- At any temperature if the food remains frozen.

7.3.5.1.3 Thawing (17) [2 demerit points]

POTENTIALLY HAZARDOUS FOOD must be thawed as one of the following:

- Under refrigeration that maintains the food temperature at 5°C (41°F) or less.
- Completely submerged under running water at a water temperature of 21°C (70°F) or below, with sufficient water velocity to agitate and float off loose particles in an overflow, and for a period of time that does not allow thawed portions of READY-TO-EAT FOOD to rise above 5°C (41°F).
- Completely submerged under running water at a water temperature of 21°C (70°F) or below, with sufficient water velocity to agitate and float off loose particles in an overflow, and for a period of time that does not allow thawed portions of a raw animal food requiring cooking to be above 5°C (41°F) for more than 4 hours, including
 - The time the food is exposed to the running water and the time needed for preparation for cooking, OR
 - The time it takes under refrigeration to lower the food temperature to 5°C (41°F).
- As part of a cooking process if the frozen food is cooked or thawed in a microwave oven.
- Using any procedure if a portion of frozen READY-TO-EAT FOOD is thawed and prepared for immediate service in response to an individual CONSUMER'S order.

7.3.5.2 Food Cooling

7.3.5.2.1 Cooling Times/Temperatures (16 C) [5 demerit points]

Cooked POTENTIALLY HAZARDOUS FOOD must be cooled

- From 57°C (135°F) to 21°C (70°F) within 2 hours and
- From 21°C (70°F) to 5°C (41°F) or less within 4 hours.

7.3.5.2.2 Cooling Prepared Food (16 C) [5 demerit points]

POTENTIALLY HAZARDOUS FOOD must be cooled within 4 hours to 5°C (41°F) or less if prepared from ingredients at ambient temperature (such as reconstituted foods and canned tuna).

7.3.5.2.3 Cooling Received Food (16 C) [5 demerit points]

A POTENTIALLY HAZARDOUS FOOD received in compliance with LAWS allowing a temperature above 5°C (41°F) during shipment from the supplier must be cooled within 4 hours to 5°C (41°F) or less.

7.3.5.2.4

Shell Eggs [0 demerit point]

Shell eggs need not comply with the cooling time if, on receipt, they are placed immediately into refrigerated EQUIPMENT capable of maintaining food at 5°C (41°F) or less.

7.3.5.2.5

Cooling Methods (17) [2 demerit points]

Cooling must be accomplished using one or more of the following methods based on the type of food being cooled:

- Placing the food in shallow pans.
- Separating the food into smaller or thinner portions.
- Using BLAST CHILLERS, freezers, or other rapid cooling EQUIPMENT.
- Stirring the food in a container placed in an ice water bath.
- Using containers that facilitate heat transfer.
- Adding ice as an ingredient.
- Other effective methods.

When placed in cooling or cold-holding EQUIPMENT, food containers in which food is being cooled must be arranged in the EQUIPMENT to provide maximum heat transfer through the container walls and must be loosely covered—or uncovered if protected from overhead CONTAMINATION—during the cooling period to facilitate heat transfer from the surface of the food.

7.3.5.2.6

Cooling Logs (17) [2 demerit points]

Logs documenting cooked POTENTIALLY HAZARDOUS FOOD cooling temperatures and times from the starting points designated in 7.3.5.2.1 through the control points at 2 and 6 hours must be maintained onboard the vessel for a period of 30 days from the date the food was placed in a cooling process. Logs documenting cooling of POTENTIALLY HAZARDOUS FOODS prepared from ingredients at ambient temperatures, with the start time to the time when 5°C (41°F) is reached, must also be maintained for a 30-day period, beginning with the day of preparation.

7.3.5.3 Food Holding Temperatures and Times

7.3.5.3.1

Holding Temperature/Time (16 C) [5 demerit points]

Except during preparation, cooking, or cooling, or when time is used as the public health control, POTENTIALLY HAZARDOUS FOOD must be maintained at

- 57°C (135°F) or above, except that roasts may be held at a temperature of 54°C (130°F); or
- 5°C (41°F) or less.

7.3.5.3.2

RTE PHF Shelf-life: Date Marking (16 C) [5 demerit points]

Refrigerated, READY-TO-EAT, POTENTIALLY HAZARDOUS FOOD

- Prepared on a vessel and held refrigerated for more than 24 hours must be clearly marked at the time of preparation to indicate the date or day by which the food must be consumed (7 calendar days or fewer from the day the food is prepared). The day of preparation is counted as day 1.

- Prepared and PACKAGED by a FOOD-PROCESSING PLANT and held on the vessel after opening for more than 24 hours must be clearly marked at the time the original container is opened to indicate the date by which the food must be consumed (7 calendar days or fewer after the original container is opened). The day of opening is counted as day 1.

The date marking requirement can be accomplished with a calendar date, day of the week, color-code, or other system, provided it is effective.

The date marking requirement does not apply to the following foods prepared and PACKAGED by a food processing plant inspected by a REGULATORY AUTHORITY:

- Deli salads (such as ham salad, seafood salad, chicken salad, egg salad, pasta salad, potato salad, and macaroni salad) manufactured in accordance with 21 CFR 110.
- Hard cheeses containing not more than 39% moisture as defined in 21 CFR 133 (such as cheddar, gruyere, parmesan and reggiano, and romano).
- Semisoft cheeses containing more than 39% moisture, but not more than 50% moisture, as defined in 21 CFR 133 (such as blue, edam, gorgonzola, gouda, and monterey jack).
- Cultured dairy products as defined in 21 CFR 131 (such as yogurt, sour cream, and buttermilk).
- Preserved FISH products (such as pickled herring and dried or salted cod) and other acidified FISH products defined in 21 CFR 114.
- Shelf stable, dry fermented sausages (such as pepperoni and Genoa salami) that are not labeled “keep refrigerated” as specified in 9 CFR 317 [retain the original casing on the product].
- Shelf stable salt-cured products (such as prosciutto and Parma [ham]) that are not labeled “keep refrigerated” as specified in 9 CFR 317.

These products are exempted from date marking even after being opened, cut, shredded, etc.

7.3.5.3.3 *Discarding RTE PHF (16 C) [5 demerit points]*

Refrigerated, READY-TO-EAT, POTENTIALLY HAZARDOUS FOOD must be discarded if not consumed within 7 calendar days from the date of preparation or opening.

7.3.5.3.4 *Retain Date (16 C) [5 demerit points]*

A refrigerated, potentially hazardous, READY-TO-EAT food ingredient or a portion of a refrigerated, potentially hazardous, READY-TO-EAT food that is subsequently combined with additional ingredients or portions of food must retain the date marking of the earliest or first-prepared ingredient.

7.3.5.3.5 *Time as a Public Health Control (16 C) [5 demerit points]*

If time only—rather than time in conjunction with temperature—is

used as the public health control for a working supply of POTENTIALLY HAZARDOUS FOOD before cooking, or for READY-TO-EAT POTENTIALLY HAZARDOUS FOOD that is displayed or held for service for immediate consumption, the food

- Must have an initial temperature of 5°C (41°F) or less or 57°C (135°F) or greater before placement on time control.
- May not be placed on temperature control again.
- Must be marked or otherwise identified to indicate the time 4 hours past the point in time when the food is removed from temperature control (if the time between service set-up and closing is greater than 4 hours).
- Must be discarded within 4 hours of placement on time control.

7.3.5.3.6 Time Control Plan (16 C) [5 demerit points]

A written time control plan(s) that ensures compliance with these guidelines must be maintained on the vessel and made available for review during inspections (Annex 13.11). A time control plan must be posted at each outlet where time control is used. The plan(s) must

- Include set-up and discard times for each outlet.
- List refrigeration and hot holding units (compartments and cabinets) on time control (the physical units must also be labeled as such).
- Describe or show the flow of POTENTIALLY HAZARDOUS FOOD from when last in temperature control to placement in time control and discard.

7.3.6 Consumer Information

7.3.6.1 Advisory

7.3.6.1.1 Consumer Advisory (16 C) [5 demerit points]

If an animal food such as beef, eggs, FISH, lamb, milk, pork, POULTRY, or shellfish that is raw, undercooked, or not otherwise processed to eliminate pathogens is offered in a READY-TO-EAT form or as a raw ingredient in another READY-TO-EAT FOOD, the CONSUMER must be informed by way of disclosure as specified below using menu advisories, placards, or other easily visible written means of the significantly increased risk to certain especially vulnerable CONSUMERS eating such foods in raw or undercooked form. The advisory must be located at the outlets where these types of food are served.

Raw shell egg preparations are prohibited in uncooked products as described in 7.3.3.2.3.

Disclosure must be made by one of the two following methods:

- On a sign describing the animal-derived foods (e.g., “oysters on the half-shell,” “hamburgers,” “steaks,” or “eggs”); AND that they can be cooked to order and may be served raw or undercooked; AND a statement indicating that consuming raw or undercooked MEATS, seafood, shellfish, eggs, milk, or POULTRY may increase your risk for foodborne illness, especially if you have

certain medical conditions. The advisory must be posted at the specific station where the food is served raw, undercooked, or cooked to order.

OR

- On a menu using an asterisk at the animal-derived foods requiring disclosure and a footnote with a statement indicating that consuming raw or undercooked MEATS, seafood, shellfish, eggs, milk, or POULTRY may increase your risk for foodborne illness, especially if you have certain medical conditions.

It is acceptable to limit the list of animal-derived foods in the CONSUMER advisory to only the type(s) of animal-derived food served raw, undercooked, or cooked to order at a specific location. For example, at a sushi counter, the CONSUMER advisory might only refer to seafood.

A CONSUMER advisory is not required for raw or undercooked WHOLE-MUSCLE, INTACT BEEF steak as specified under 7.3.2.1.

7.3.7 Contaminated Food

7.3.7.1 Discarding Food

7.3.7.1.1 Unsafe/Adulterated (18 C) [3 demerit points]

A food that is unsafe or ADULTERATED must be discarded.

7.3.7.1.2 Unapproved Source (18 C) [3 demerit points]

Food that is not from an APPROVED source must be discarded.

7.3.7.1.3 Restricted or Excluded Employee (18 C) [3 demerit points]

READY-TO-EAT FOOD that may have been contaminated by an employee who has been restricted or excluded for FOOD EMPLOYEE health issues must be discarded.

7.3.7.1.4 Contaminated by Others (18 C) [3 demerit points]

Food that is contaminated by FOOD EMPLOYEES, CONSUMERS, or other persons through contact with their hands, bodily discharges (such as nasal or oral discharges), or other means must be discarded.

7.4 Equipment and Utensils

7.4.1 Materials

7.4.1.1 Multiuse Characteristics and Use Limitations

7.4.1.1.1 Safe Food-contact Materials (26 C) [3 demerit points]

Materials used in the construction of multiuse UTENSILS and FOOD-CONTACT SURFACES of EQUIPMENT may not allow the migration of deleterious substances or impart colors, odors, or tastes to food and must be safe under normal use conditions.

7.4.1.1.2 Food-contact Surfaces (20) [2 demerit points]

Materials used in the construction of multiuse UTENSILS and FOOD-CONTACT SURFACES of EQUIPMENT must be as follows:

- Durable, corrosion-resistant, and nonabsorbent.
- Sufficient in weight and thickness to withstand repeated WAREWASHING.
- Finished to have a SMOOTH, EASILY CLEANABLE surface.
- Resistant to pitting, chipping, crazing, scratching, scoring, distortion, and decomposition.

7.4.1.1.3 Cast Iron (20) [2 demerit points]

Cast iron may not be used for UTENSILS or FOOD-CONTACT SURFACES of EQUIPMENT. *Cast iron may be used as a surface for cooking. Cast iron may be used in UTENSILS for serving food if the UTENSILS are used only as part of an uninterrupted process from cooking through service.*

Cast iron food display dishes heated to a temperature of 74°C (165°F) for 15 seconds may be used for the immediate service of food.

7.4.1.1.4 Lead (20) [2 demerit points]

Limitation of lead use must be as follows:

- Ceramic, china, crystal UTENSILS, and decorative UTENSILS such as hand-painted ceramic or china that are used in contact with food must be lead-free or contain levels of lead not exceeding the limits for specific UTENSIL categories as allowed by LAW.
- Pewter alloys containing lead in excess of 0.05% may not be used as a FOOD-CONTACT SURFACE.
- Solder and flux containing lead in excess of 0.2% may not be used as a FOOD-CONTACT SURFACE.

7.4.1.1.5 Copper/Brass (26 C) [3 demerit points]

Copper and copper alloys such as brass may not be used in contact with a food that has a PH below 6 (such as vinegar, fruit juice, or wine) or for a fitting or tubing installed between a BACKFLOW PREVENTION DEVICE and a carbonator.

Copper and copper alloys may be used in contact with beer brewing ingredients that have a PH below 6 in the prefermentation and fermentation steps of a beer brewing operation such as a brewpub or microbrewery.

7.4.1.1.6 Galvanized (26 C) [3 demerit points]

Galvanized metal may not be used for UTENSILS or FOOD-CONTACT SURFACES of EQUIPMENT.

7.4.1.1.7 Wood (20) [2 demerit points]

Wood use must be limited as follows:

- Wood and wood wicker may not be used as a FOOD-CONTACT SURFACE.
- *Hard maple or an equivalently hard, close-grained wood may be used for cutting boards; cutting*

blocks; bakers' tables; and UTENSILS such as rolling pins, doughnut dowels, serving dishes, and chopsticks; and wooden paddles used in confectionery operations for pressure scraping kettles when manually preparing confections at a temperature of 110°C (230°F) or above.

- Whole, uncut, raw fruits and vegetables, and nuts in the shell, may be kept in the wood shipping container in which they were received until the fruits, vegetables, or nuts are used.*
- If the nature of the food requires removal of rinds, peels, husks, or shells before consumption, the whole, uncut, raw food may be kept in untreated wood containers or in treated wood containers if the containers are treated with a preservative that meets the requirements specified in U.S. 21 CFR 178.3800 Preservatives for Wood.*

7.4.1.1.8 Coatings (20) [2 demerit points]

Multiuse KITCHENWARE such as frying pans, griddles, sauce pans, cookie sheets, and waffle bakers that have a perfluorocarbon resin coating must be used with nonscoring or nonscratching UTENSILS and cleaning aids.

7.4.1.1.9 Non-food-contact Surfaces (21) [1 demerit point]

NON-FOOD-CONTACT SURFACES of EQUIPMENT that are exposed to splash, spillage, or other food soiling or that require frequent cleaning must be constructed of a corrosion-resistant, nonabsorbent, and SMOOTH material.

7.4.1.2 Single-service and Single-use Characteristics

7.4.1.2.1 Single-service Materials Safe (26 C) [3 demerit points]

Materials used to make SINGLE-SERVICE and SINGLE-USE ARTICLES must not allow the migration of deleterious substances and must be safe.

7.4.1.2.2 No Colors/Odors/Taste (20) [2 demerit points]

Materials used to make SINGLE-SERVICE and SINGLE-USE ARTICLES must not impart colors, odors, or tastes to food and must be clean.

7.4.2 Design and Construction

7.4.2.1 Durability and Strength

7.4.2.1.1 Food-contact Durability/Strength (20) [2 demerit points]

FOOD-CONTACT SURFACES of EQUIPMENT and UTENSILS must be designed and constructed to be durable and to retain their characteristic qualities under normal use conditions.

7.4.2.1.2 Non-food-contact Durability/Strength (21) [1 demerit point]

NON-FOOD-CONTACT SURFACES of EQUIPMENT and UTENSILS must be designed and constructed to be durable and to retain their

characteristic qualities under normal use conditions.

7.4.2.1.3

Glass TMDs (26 C) [3 demerit points]

Food TEMPERATURE-MEASURING DEVICES may not have sensors or stems constructed of glass, except for thermometers with glass sensors or stems encased in a shatterproof coating (such as candy thermometers).

7.4.2.2 Cleanability

7.4.2.2.1

Multiuse Food-contact Surfaces (20) [2 demerit points]

Multiuse FOOD-CONTACT SURFACES must be

- SMOOTH.
- Free of breaks, open SEAMS > 0.8 millimeters (1/32 inch), cracks, chips, inclusions, pits, and similar imperfections.
- Free of sharp internal angles, corners, and crevices.
- Finished to have SMOOTH welds and joints.
- ACCESSIBLE for cleaning and inspection by one of the following methods without being disassembled, by disassembling without the use of tools, or by easy disassembling with the use of handheld tools commonly available to maintenance and cleaning personnel (such as screwdrivers, pliers, open-end wrenches, and Allen wrenches). This section does not apply to cooking oil storage tanks, distribution lines for cooking oils, or BEVERAGE syrup lines or tubes.

Use low profile, nonslotted, NONCORRODING, and easy-to-clean fasteners on FOOD-CONTACT SURFACES and in splash zones. The use of exposed slotted screws, Phillips head screws, or pop rivets in these areas is prohibited.

7.4.2.2.2

CIP Equipment Design/Construction (20) [2 demerit points]

Clean-in-place EQUIPMENT must be designed and constructed so that cleaning and sanitizing solutions circulate throughout a fixed system and contact all interior FOOD-CONTACT SURFACES and so that the system self drains or can be completely drained of cleaning and sanitizing solutions.

Clean-in-place EQUIPMENT that is not designed to be disassembled for cleaning must be designed with inspection access points to ensure that all interior FOOD-CONTACT SURFACES throughout the fixed system are being effectively cleaned.

7.4.2.2.3

“V” Type Threads (20) [2 demerit points]

Except for hot oil cooking or filtering EQUIPMENT, “V” type threads may not be used on FOOD-CONTACT SURFACES.

7.4.2.2.4

Oil Filtering Equipment (20) [2 demerit points]

Hot oil filtering EQUIPMENT must be READILY ACCESSIBLE for filter replacement and filter cleaning.

7.4.2.2.5

Can Openers (20) [2 demerit points]

Cutting or piercing parts of can openers must be READILY REMOVABLE for cleaning and replacement.

7.4.2.2.6 Non-food-contact Design (21) [1 demerit point]

NON-FOOD-CONTACT SURFACES must be free of unnecessary ledges, projections, and crevices, and must be designed and constructed to allow easy cleaning and facilitate maintenance.

7.4.2.2.7 Kick Plates (21) [1 demerit point]

Kick plates must be designed so that the areas behind them are ACCESSIBLE for inspection and cleaning by being easily REMOVABLE or capable of being rotated open without unlocking EQUIPMENT doors.

7.4.2.2.8 Grease Filters (21) [1 demerit point]

Filters or other grease-extracting EQUIPMENT must be designed to be READILY REMOVABLE for cleaning and replacement if not designed to be CLEANED IN PLACE.

7.4.2.3 Food TMDs (20) [2 demerit points]

Food TEMPERATURE-MEASURING DEVICES must be provided and READILY ACCESSIBLE for use in ensuring attainment and maintenance of food temperatures. Tip-sensitive TEMPERATURE-MEASURING DEVICES, such as a thermocouple or thermistor, must be used for measuring thin food products.

7.4.2.3.1 Food TMD Accuracy (20) [2 demerit points]

Food TEMPERATURE-MEASURING DEVICES

- That are scaled only in Celsius or dually scaled in Celsius and Fahrenheit must be accurate to $\pm 1^{\circ}\text{C}$ ($\pm 2^{\circ}\text{F}$) in the intended range of use.
- That are scaled only in Fahrenheit must be accurate to $\pm 2^{\circ}\text{F}$ in the intended range of use.

Food TEMPERATURE-MEASURING DEVICES must have a numerical scale, printed record, or digital readout in increments no greater than 1°C (2°F) in the intended range of use.

7.4.2.3.2 Ambient Air TMD Accuracy (21) [1 demerit point]

Ambient air TEMPERATURE-MEASURING DEVICES

- That are scaled in Celsius or dually scaled in Celsius and Fahrenheit must be designed to be easily readable and accurate to $\pm 1.5^{\circ}\text{C}$ ($\pm 3^{\circ}\text{F}$) in the intended range of use.
- That are scaled only in Fahrenheit must be accurate to $\pm 3^{\circ}\text{F}$ in the intended range of use.

7.4.2.4 Functionality

7.4.2.4.1 Ventilation Hood Design (37) [1 demerit point]

Exhaust ventilation hood systems in FOOD PREPARATION and WAREWASHING areas—including components such as hoods, fans, guards, and ducting—must be designed to prevent grease or condensation from draining or dripping onto food, EQUIPMENT, UTENSILS, LINENS, and SINGLE-SERVICE and SINGLE-USE ARTICLES.

7.4.2.4.2 Equipment Openings, Closures, and Deflectors (20) [2

demerit points]

EQUIPMENT openings, closures, and deflectors must conform to the following:

- A cover or lid for EQUIPMENT must overlap the opening and be sloped to drain.
- An opening located in the top of a unit of EQUIPMENT that is designed for use with a cover or lid must be flanged upward at least 5 millimeters (2/10 of an inch).
- Fixed piping, TEMPERATURE-MEASURING DEVICES, rotary shafts, and other parts extending into EQUIPMENT must be provided with a watertight joint at the point where the item enters the EQUIPMENT.
- If a watertight joint is not provided, the piping, TEMPERATURE-MEASURING DEVICES, rotary shafts, and other parts extending through the openings must be equipped with an apron designed to deflect condensation, drips, and dust from openings into the food; the opening must be flanged at least 5 millimeters (2/10 of an inch).

7.4.2.4.3 Beverage/Ice Dispensing (20) [2 demerit points]

In EQUIPMENT that dispenses liquid food or ice in unpackaged form,

- The delivery tube, chute, orifice, and splash surfaces directly above the container receiving the food must be designed in a manner (such as with barriers, baffles, or drip aprons) so that drips from condensation and splash are diverted from the opening of the container receiving the food.
- The delivery tube, chute, and orifice must be protected from manual contact (such as by being recessed).
- The delivery tube or chute and orifice of EQUIPMENT used to vend liquid food or ice in unpackaged form to self-service CONSUMERS must be designed so that the delivery tube or chute and orifice are protected from dust, insects, rodents, and other CONTAMINATION by a self-closing door if the EQUIPMENT is located in an outside area that does not otherwise afford the protection of an enclosure against the rain, windblown debris, insects, rodents, and other contaminants present in the environment, or if it is available for self service during hours when it is not under the full-time supervision of a FOOD EMPLOYEE.
- The dispensing EQUIPMENT actuating lever or mechanism and filling device of CONSUMER self-service BEVERAGE dispensing EQUIPMENT must be designed to prevent contact with the lip-contact surface of glasses or cups that are refilled.

7.4.2.4.4 Bearings/Gears (21) [1 demerit point]

EQUIPMENT containing bearings and gears that require lubricants must be designed and constructed so that the lubricant cannot leak, drip, or be forced into food or onto FOOD-CONTACT

SURFACES.

7.4.2.4.5 Beverage Line Cooling (20) [2 demerit points]

BEVERAGE tubing and cold-plate BEVERAGE cooling devices may not be installed in contact with stored ice. *This guideline does not apply to cold plates that are constructed integrally without SEAMS in an ice storage bin.*

7.4.2.4.6 Equipment Drainage (21) [1 demerit point]

EQUIPMENT compartments subject to accumulation of moisture because of conditions such as condensation, food or BEVERAGE drip, or water from melting ice must be sloped to an outlet that allows complete draining.

7.4.2.4.7 Drain Lines (20) [2 demerit points]

Liquid waste drain lines may not pass through an ice machine or ice storage bin.

7.4.2.4.8 Condenser Unit (21) [1 demerit point]

If a condenser unit is an integral component of EQUIPMENT, the condenser unit must be separated from the food and FOOD STORAGE space by a dustproof barrier.

7.4.2.4.9 Ambient Air TMDs (21) [1 demerit point]

TEMPERATURE-MEASURING DEVICES must conform to the following guidelines:

- In a mechanically refrigerated or hot-food storage unit, the sensor of a TEMPERATURE-MEASURING DEVICE must be located to measure the air temperature in the warmest part of a mechanically refrigerated unit and in the coolest part of a hot-food storage unit.
- Cold or hot holding EQUIPMENT used for POTENTIALLY HAZARDOUS FOOD must be designed to include and must be equipped with at least one integral or affixed TEMPERATURE-MEASURING DEVICE that is located to allow easy viewing of the device's temperature display.
- The above bullets do not apply to EQUIPMENT for which the placement of a TEMPERATURE-MEASURING DEVICE is not a practical means for measuring the ambient air surrounding the food because of the design, type, and use of the EQUIPMENT (such as calrod units, heat lamps, cold plates, bains-marie, steam tables, insulated food transport containers, and salad bars).
- TEMPERATURE-MEASURING DEVICES must be easily readable.

7.4.2.5 Food Equipment, Standards and Classification

7.4.2.5.1 Food-contact Equipment Standards (20) [2 demerit points]

FOOD-CONTACT SURFACES of food EQUIPMENT must comply with

American National Standards Institute (ANSI), **National Sanitation Foundation International (NSF International)**, or other internationally accredited food EQUIPMENT sanitation standards for materials, design, and construction.

7.4.2.5.2 *Non-food-contact Equipment Standards (21) [1 demerit point]*

NON-FOOD-CONTACT SURFACES of food EQUIPMENT must comply with American National Standards Institute (ANSI), **National Sanitation Foundation International (NSF International)**, or other internationally accredited food-EQUIPMENT sanitation standards for materials, design, and construction.

7.4.3 Numbers and Capacities

7.4.3.1 Cooling, Heating, and Holding Capacities

7.4.3.1.1 *Cold/Hot Holding Capacity (20) [2 demerit points]*

EQUIPMENT for cooling and heating food, and for holding cold and hot food, must be sufficient in number and capacity to maintain POTENTIALLY HAZARDOUS FOOD temperatures.

7.4.3.2 Ventilation Hood Systems

7.4.3.2.1 *Ventilation Hood (37) [1 demerit point]*

Ventilation hood systems and devices must be sufficient in number and capacity to prevent grease or condensation from collecting on bulkheads and deckheads.

7.4.3.4 Food Temperature-measuring Devices

7.4.3.4.1 *Food TMDs (20) [2 demerit points]*

Food TEMPERATURE-MEASURING DEVICES must be provided and READILY ACCESSIBLE for use in ensuring attainment and maintenance of food temperatures.

7.4.4 Equipment Location and Installation

7.4.4.1 Fixed Equipment, Spacing or Sealing

7.4.4.1.1 *Fixed Equipment Installation (21) [1 demerit point]*

EQUIPMENT that is fixed because it is not EASILY MOVABLE must be installed so that it is

- Spaced to allow access for cleaning along the sides, behind, under, and above the EQUIPMENT;
- Spaced from adjoining EQUIPMENT, bulkhead, and deckhead at a distance of not more than 0.8 millimeter or 1/32 inch; or
- Sealed to adjoining EQUIPMENT or bulkhead (if the equipment is exposed to spillage or seepage).

7.4.4.1.2 *Table-mounted Sealed or Elevated (21) [1 demerit point]*

TABLE-MOUNTED EQUIPMENT that is not EASILY MOVABLE must be installed to allow cleaning of the EQUIPMENT and areas underneath and around the EQUIPMENT by being

- Sealed to the table or

- Elevated on legs.

7.4.4.2 Fixed Equipment, Elevation or Sealing

7.4.4.2.1 ***Deck-mounted Sealed or Elevated (21) [1 demerit point]***

Deck-mounted EQUIPMENT that is not EASILY MOVABLE must be sealed to the deck or elevated on legs that provide at least a 150-millimeter (6-inch) clearance between the deck and the EQUIPMENT.

7.4.4.2.2 ***Deck-mounted Clearance [0 demerit point]***

If no part of the deck under the deck-mounted EQUIPMENT is more than 150 millimeters (6 inches) from the point of cleaning access, the clearance space may be only 100 millimeters (4 inches).

7.4.4.2.3 ***Table-mounted Elevated (21) [1 demerit point]***

TABLE-MOUNTED EQUIPMENT that is not EASILY MOVABLE must be elevated on legs that provide at least a 100-millimeter (4-inch) clearance between the table and the EQUIPMENT.

7.4.4.2.4 ***Table-mounted Clearance [0 demerit point]***

The clearance space between the table and TABLE-MOUNTED EQUIPMENT may be either

- *75 millimeters (3 inches) if the horizontal distance of the table top under the EQUIPMENT is no more than 500 millimeters (20 inches) from the point of access for cleaning; or*
- *50 millimeters (2 inches) if the horizontal distance of the table top under the EQUIPMENT is no more than 75 millimeters (3 inches) from the point of access for cleaning.*

7.4.5 Maintenance and Operation

7.4.5.1 Equipment

7.4.5.1.1 ***Food-contact Equipment in Good Repair (20) [2 demerit points]***

Food-contact EQUIPMENT must be maintained in good repair and proper adjustment, including the following:

- EQUIPMENT must be maintained in a state of repair and condition that meets the materials, design, construction, and operation specifications of these guidelines.
- Cutting or piercing parts of can openers must be kept sharp to minimize the creation of metal fragments that can contaminate food when the container is opened.

7.4.5.1.2 ***Non-food-contact Equipment in Good Repair (21) [1 demerit point]***

NON-FOOD-CONTACT EQUIPMENT must be maintained in good repair and proper adjustment, including the following:

- EQUIPMENT must be maintained in a state of repair and condition that meets the materials, design, construction,

and operation specifications of these guidelines.

- EQUIPMENT components such as doors, seals, hinges, fasteners, and kick plates must be kept intact and tight and adjusted in accordance with manufacturer's specifications.

7.4.5.1.3 Cutting Boards (20) [2 demerit points]

Surfaces such as cutting blocks and boards that are subject to scratching and scoring must be resurfaced if they can no longer be effectively cleaned and sanitized or must be discarded if they cannot be resurfaced.

7.4.5.1.4 Microwave Ovens (20) [2 demerit points]

Microwave ovens must meet the safety standards specified in 21 CFR 1030.10 Microwave Ovens, or equivalent.

7.4.5.2 Good Repair and Calibration

7.4.5.2.1 Utensils and TMDs in Good Repair and Calibration (20) [2 demerit points]

UTENSILS and TEMPERATURE-MEASURING DEVICES must be maintained in good repair and proper adjustment, including the following:

- UTENSILS must be maintained in a state of repair or condition that meets the materials, design, and construction specifications of these guidelines or must be discarded.
- Food TEMPERATURE-MEASURING DEVICES must be calibrated in accordance with manufacturer's specifications as necessary to ensure their accuracy.

7.4.5.2.2 Ambient Air TMDs Good Repair and Calibration (21) [1 demerit point]

Ambient air TEMPERATURE-MEASURING DEVICES must be maintained in good repair and be accurate within the intended range of use.

7.4.5.3 Single-service and Single-use Articles

7.4.5.3.1 No Reuse (28) [2 demerit points]

SINGLE-SERVICE and SINGLE-USE ARTICLES may not be reused.

7.4.5.3.2 Bulk Milk Tubes (20) [2 demerit points]

The bulk milk container dispensing tube must be cut on the diagonal, leaving no more than 25 millimeters (1 inch) protruding from the chilled dispensing head.

7.4.5.3.3 Shell Reuse (28) [2 demerit points]

Mollusk and crustacean shells may not be used more than once as serving containers.

7.5 Warewashing

7.5.1 Warewashing Design and Construction

7.5.1.1 Warewashing Measuring Device Accuracy (22) [2 demerit points]

Provide a maximum registering TEMPERATURE-MEASURING DEVICE to verify the temperature in the warewash machines and the three-compartment sink.

7.5.1.1.1 Water TMD Accuracy (22) [2 demerit point]

Water TEMPERATURE-MEASURING DEVICES that are scaled

- In Celsius or dually scaled in Celsius and Fahrenheit must be designed to be accurate to $\pm 1.5^{\circ}\text{C}$ ($\pm 3^{\circ}\text{F}$) in the intended range of use.
- Only in Fahrenheit must designed to be accurate to $\pm 3^{\circ}\text{F}$ in the intended range of use.

7.5.1.1.2 Pressure Gauge Accuracy (22) [2 demerit points]

Pressure measuring devices that display pressures in the water supply line for the fresh hot water sanitizing rinse must have increments of 7 kilopascals (1 pound per square inch or 0.07 bar) or smaller and must be accurate to ± 14 kilopascals (± 2 pounds per square inch or ± 0.14 bar) in the 100-170 kilopascals (15-25 pounds per square inch or 1.03-1.72 bars) range.

7.5.1.2 Warewashing Functionality

7.5.1.2.1 Water TMDs Readable (22) [2 demerit points]

Water TEMPERATURE-MEASURING DEVICES must be designed to be easily readable.

7.5.1.2.2 Water TMD Scale (22) [2 demerit points]

Water TEMPERATURE-MEASURING DEVICES on WAREWASHING machines must have a numerical scale, printed record, or digital readout in increments no greater than 1°C (2°F) in the intended range of use.

7.5.1.2.3 Warewasher Data Plate (22) [2 demerit points]

A WAREWASHING machine must be provided with an easily ACCESSIBLE and readable data plate affixed to or posted adjacent to the machine that indicates the machine's design and operating specifications including the

- Wash tank, rinse tank(s) if present, and final sanitizing rinse temperatures.
- Pressure required for the fresh water sanitizing rinse unless the machine is designed to use only a pumped sanitizing rinse.
- Conveyor speed in feet per minute or minimum transit time for belt conveyor machines, minimum transit time for rack conveyor machines, and wash and final sanitizing rinse times as specified by the manufacturer for stationary rack machines.

7.5.1.2.4 Baffles/Curtains (22) [2 demerit points]

WAREWASHING machine wash and rinse tanks must be equipped with baffles, curtains, or other means to minimize internal cross-

CONTAMINATION of the solutions in wash and rinse tanks.

7.5.1.2.5 Warewash TMDs (22) [2 demerit points]

A WAREWASHING machine must be equipped with a TEMPERATURE-MEASURING DEVICE that indicates the temperature of the water in each wash tank, and rinse tank(s) if present, and the final sanitizing rinse manifold.

7.5.1.2.6 Pressure Gauge (22) [2 demerit points]

WAREWASHING machines that provide a fresh hot water sanitizing rinse must be equipped with a pressure gauge or similar device such as a transducer that measures and displays the water pressure in the supply line immediately before entering the WAREWASHING machine.

If the flow pressure measuring device is upstream of the fresh hot water sanitizing rinse control valve, the device must be mounted in a 6.4-millimeter (1/4-inch) iron pipe size (IPS) valve.

These guidelines do not apply to a machine that uses only a pumped or recirculated sanitizing rinse.

7.5.1.2.7 Manual Sanitizing Booster Heater (22) [2 demerit points]

If hot water is used for SANITIZATION in manual WAREWASHING operations, the sanitizing compartment of the sink must be designed with an integral heating device that is capable of maintaining water at a temperature not less than 77°C (171°F).

7.5.1.2.8 Self Draining (22) [2 demerit points]

Sinks and drainboards of WAREWASHING sinks and machines must be self draining.

7.5.2 Warewashing Numbers and Capacities

7.5.2.1 Three-compartment Sinks

7.5.2.1.1 Three-compartment Sink (22) [2 demerit points]

A sink with at least three compartments must be provided for manually washing, rinsing, and sanitizing EQUIPMENT and UTENSILS.

7.5.2.1.2 Size (22) [2 demerit points]

Sink compartments must be large enough to accommodate immersion of the largest EQUIPMENT and UTENSILS. If EQUIPMENT or UTENSILS are too large for the WAREWASHING sink, a WAREWASHING machine or alternative EQUIPMENT, such as a three-bucket system, must be used.

7.5.2.1.3 Manual Warewashing Alternatives [0 demerit point]

Alternative manual WAREWASHING EQUIPMENT may be used when there are special cleaning needs or constraints and its use is APPROVED. Alternative manual WAREWASHING EQUIPMENT may include the following:

- *High-pressure detergent sprayers.*
- *Low- or line-pressure spray detergent foamers.*
- *Other task-specific cleaning EQUIPMENT.*

- *Brushes or other implements.*
- *Receptacles such as a three-bucket system that substitute for the compartments of a three-compartment sink.*

7.5.2.2 Drainboards

7.5.2.2.1 Soiled/Clean Storage (22) [2 demerit points]

Drainboards, UTENSIL racks, or tables large enough to accommodate all soiled and cleaned items that may accumulate during hours of operation must be provided for necessary UTENSIL holding before cleaning and after sanitizing.

7.5.2.3 Sanitizing Solutions, Testing Devices

7.5.2.3.1 Test Kit (22) [2 demerit points]

A test kit or other device that accurately measures the concentration in milligrams per liter (parts per million) of sanitizing solutions must be provided.

7.5.3 Warewashing Equipment Maintenance and Operation

7.5.3.1 Good Repair and Proper Adjustment

7.5.3.1.1 Warewash Equipment Repair (22) [2 demerit points]

WAREWASHING EQUIPMENT must be maintained in good repair and proper adjustment, including the following:

- WAREWASHING EQUIPMENT must be maintained in a state of repair and condition that meets the standards of the materials, design, and construction of these guidelines.
- Water pressure and water TEMPERATURE-MEASURING DEVICES must be maintained in good repair and be accurate within the intended range of use.

7.5.3.1.2 Warewash Equipment Cleaning (22) [2 demerit points]

WAREWASHING machines, drainboards, and the compartments of sinks, basins, or other receptacles used for washing and rinsing EQUIPMENT, UTENSILS, or raw foods, or laundering wiping cloths must be cleaned as follows:

- Before use.
- Throughout the day at a frequency necessary to prevent RECONTAMINATION of EQUIPMENT and UTENSILS and to ensure that the EQUIPMENT performs its intended function.
- At least every 24 hours (if used).

7.5.3.1.3 Warewash Equipment Operation (22) [2 demerit points]

A WAREWASHING machine and its auxiliary components must be operated in accordance with the machine's data plate and other manufacturer's instructions.

A WAREWASHING machine's conveyor speed or automatic cycle times must be maintained accurately timed in accordance with manufacturer's specifications.

7.5.3.1.4 Cleaners (22) [2 demerit points]

When used for WAREWASHING, the wash compartment of a sink, mechanical warewasher, or wash receptacle of alternative manual WAREWASHING EQUIPMENT must contain a wash solution of soap, detergent, acid cleaner, alkaline cleaner, degreaser, abrasive cleaner, or other cleaning agent according to the cleaning agent manufacturer's label instructions.

7.5.3.1.5 *Solution Clean (22) [2 demerit points]*

The wash, rinse, and sanitize solutions must be maintained clean.

7.5.3.2 Wash Temperatures

7.5.3.2.1 *Manual Wash Temperature (23) [2 demerit points]*

The temperature of the wash solution in manual WAREWASHING EQUIPMENT must be maintained at not less than the temperature specified on the cleaning agent manufacturer's label instructions.

7.5.3.2.2 *Warewash Wash Temperatures (23) [2 demerit points]*

The temperature of the wash solution in spray type warewashers that use hot water to sanitize may not be less than

- 74°C (165°F) (for a stationary-rack, single-temperature machine).
- 66°C (150°F) (for a stationary-rack, dual-temperature machine).
- 71°C (160°F) (for a single-tank, conveyor, dual-temperature machine).
- 66°C (150°F) (for a multitank, conveyor, multitemperature machine).

High wash tank temperatures do not compensate for low auxiliary rinse and/or hot water final rinse sanitizing temperatures.

7.5.3.2.3 *Wash Temperatures for Chemical Machines (23) [2 demerit points]*

The temperature of the wash solution in spray-type warewashers that use chemicals to sanitize may not be less than 49°C (120°F).

7.5.3.2.4 *Alarm(22) [2 demerit point]*

For vessels built to VSP 2005 Construction Guidelines or warewash machines installed/replaced after the VSP 2005 Construction Guidelines, warewash machines must be equipped with an audible or visual alarm that indicates when the sanitizing temperature or chemical SANITIZER level has dropped below the levels stated on the machine data plate.

7.5.4 Cleaning Equipment and Utensils

7.5.4.1 Cleaning Frequency

7.5.4.1.1 *Food-contact Surfaces Clean (26 C) [3 demerit points]*

FOOD-CONTACT SURFACES of EQUIPMENT and UTENSILS must be clean to sight and touch.

7.5.4.1.2 Encrusted (26 C) [3 demerit points]

FOOD-CONTACT SURFACES of cooking EQUIPMENT and pans must be kept free of encrusted grease deposits and other soil accumulations.

7.5.4.1.3 Non-food-contact Surfaces (27) [1 demerit point]

NON-FOOD-CONTACT SURFACES of EQUIPMENT must be kept free of an accumulation of dust, dirt, food residue, and other debris.

7.5.4.1.4 Food-contact Cleaning Frequency (26 C) [3 demerit points]

EQUIPMENT FOOD-CONTACT SURFACES and UTENSILS must be washed, rinsed, and sanitized as follows:

- Before each use with a different type of raw animal food such as beef, FISH, lamb, pork, or POULTRY.
- Each time there is a change from working with raw foods to working with READY-TO-EAT FOODS.
- Between uses with raw fruits and vegetables and with POTENTIALLY HAZARDOUS FOOD.
- Before using or storing a food TEMPERATURE-MEASURING DEVICE.
- Any time during the operation when CONTAMINATION might have occurred.

7.5.4.1.5 In-use Food-contact Equipment (28) [2 demerit points]

If used with POTENTIALLY HAZARDOUS FOOD, EQUIPMENT FOOD-CONTACT SURFACES and UTENSILS used on a continuing basis must be washed, rinsed, and sanitized at least every 4 hours.

7.5.4.1.6 Dispensing Equipment Cleaning (28) [2 demerit points]

Cleaning of EQUIPMENT such as ice bins; BEVERAGE dispensing nozzles; and enclosed components of EQUIPMENT such as ice makers, cooking oil storage tanks, and distribution lines, BEVERAGE dispensing lines, and syrup dispensing lines or tubes; and coffee bean grinders must be conducted

- At a frequency specified by the manufacturer, or
- In the absence of manufacturer specifications, at a frequency necessary to preclude accumulation of soil or mold.

7.5.4.1.7 Cooking/Baking Equipment Cleaning (28) [2 demerit points]

Cooking and baking EQUIPMENT must be cleaned as follows:

- FOOD-CONTACT SURFACES of cooking and baking EQUIPMENT must be cleaned at least every 24 hours.
- Cavities and door seals of microwave ovens must be cleaned at least every 24 hours by using the manufacturer's recommended cleaning procedure.

7.5.4.2 Dry Cleaning Methods

7.5.4.2.1 Dry Cleaning (28) [2 demerit points]

If dry cleaning is used, it must be conducted as follows:

- Methods such as brushing, scraping, and vacuuming must contact only surfaces soiled with dry food residues that are not potentially hazardous.
- Cleaning EQUIPMENT used in dry cleaning FOOD-CONTACT SURFACES may not be used for any other purpose.

7.5.4.3 Precleaning and Racking

7.5.4.3.1 *Precleaning/Scrapping (23) [2 demerit points]*

Food debris on EQUIPMENT and UTENSILS must be scrapped over a waste disposal unit, pulper, or garbage receptacle or must be removed in a WAREWASHING machine with a prewash cycle.

7.5.4.3.2 *Presoak/Scrubbed (23) [2 demerit points]*

If necessary for effective cleaning, UTENSILS, and EQUIPMENT must be preflushed, presoaked, or scrubbed with abrasives.

7.5.4.3.3 *Racking (22) [2 demerit points]*

Soiled items to be cleaned in a WAREWASHING machine must be loaded into racks, trays, or baskets or onto conveyors in a position that

- Exposes the items to the unobstructed spray from all cycles and
- Allows the items to drain.

7.5.4.4 Wet Cleaning

7.5.4.4.1 *Washing (23) [2 demerit points]*

EQUIPMENT FOOD-CONTACT SURFACES and UTENSILS must be effectively washed to remove or completely loosen soils by using whatever manual or mechanical means is necessary (such as the application of detergents containing wetting agents and emulsifiers; acid, alkaline, or abrasive cleaners; hot water; brushes; scouring pads; high-pressure sprays; or ultrasonic devices).

7.5.4.4.2 *Soil-specific (22) [2 demerit points]*

The washing procedures selected must be based on the type and purpose of the EQUIPMENT or UTENSIL and on the type of soil to be removed.

7.5.4.5 Alternative Manual Warewashing Procedures

7.5.4.5.1 *Alternative Warewashing Procedures (23) [2 demerit points]*

If washing in sink compartments or a WAREWASHING machine is impractical (such as when the EQUIPMENT is fixed or the UTENSILS are too large), washing must be done by using alternative manual WAREWASHING EQUIPMENT in accordance with the following procedures:

- EQUIPMENT must be disassembled as necessary to allow access of the detergent solution to all parts.
- EQUIPMENT components and UTENSILS must be scrapped or rough-cleaned to remove food particle accumulation.
- EQUIPMENT and UTENSILS must be washed.

7.5.4.5.2 *Sponges Limited (22) [2 demerit points]*

Sponges may not be used in contact with cleaned and sanitized or in-use FOOD-CONTACT SURFACES.

7.5.4.6 Rinsing Procedures

7.5.4.6.1 *Rinsing (23) [2 demerit point]*

Washed UTENSILS and EQUIPMENT must be rinsed so that abrasives are removed and cleaning chemicals are removed or diluted with water by using one of the following procedures:

- Use of a distinct, separate water rinse after washing and before sanitizing if using a three-compartment sink, alternative manual WAREWASHING EQUIPMENT equivalent to a three-compartment sink, or a three-step washing, rinsing, and sanitizing procedure in a WAREWASHING system for CIP EQUIPMENT.
- Use of a nondistinct water rinse integrated in the application of the sanitizing solution and wasted immediately after each application (if using a WAREWASHING machine that does not recycle the sanitizing solution, or if using alternative manual WAREWASHING EQUIPMENT such as sprayers).
- Use of a nondistinct water rinse integrated in the application of the sanitizing solution if using a WAREWASHING machine that recycles the sanitizing solution for use in the next wash cycle.

7.5.5 Sanitizing

7.5.5.1 Food-contact Surfaces *(24 C) [3 demerit points]*

FOOD-CONTACT SURFACES of EQUIPMENT and UTENSILS must be sanitized.

7.5.5.2 Sanitizing Temperatures

7.5.5.2.1 *Manual Hot-water Sanitizing (24 C) [3 demerit points]*

In a manual operation, if immersion in hot water is used for sanitizing,

- The temperature of the water must be maintained at 77°C (171°F) or above and
- The FOOD-CONTACT SURFACE must be immersed for at least 30 seconds.

7.5.5.2.2 *Warewasher Hot-water Sanitizing (24 C) [3 demerit points]*

In a mechanical operation, the temperature of the fresh hot water sanitizing rinse as it enters the manifold may not be more than 90°C (194°F) or less than

- 74°C (165°F) (for a stationary rack, single-temperature machine).
- 82°C (180°F) (for all other machines).

The UTENSIL surface temperature may not be less than 71°C (160°F) (as measured by an irreversible registering temperature indicator).

The maximum temperature of 90°C (194°F) does not apply to the high pressure and temperature systems with wand-type, hand-held spraying devices used for the in-place cleaning and sanitizing of EQUIPMENT such as MEAT saws.

7.5.5.2.3 Warewasher Hot-water Sanitizing Pressure (22) [2 demerit points]

The flow pressure of the fresh hot water sanitizing rinse in a WAREWASHING machine may not be less than 34.5 kilopascals (5 pounds per square inch or 0.34 bars) or more than 207 kilopascals (30 pounds per square inch or 2.07 bars) as measured in the water line immediately downstream or upstream from the fresh hot water sanitizing rinse control valve.

7.5.5.3 Sanitizing Concentrations

7.5.5.3.1 Chemical Sanitizing Solutions (24 C) [3 demerit points]

A chemical SANITIZER used in a sanitizing solution for a manual or mechanical operation must be listed in 40 CFR 180.940 Sanitizing Solutions.

7.5.5.3.2 Chemical Sanitizing Exposure (24 C) [3 demerit points]

A chemical SANITIZER must be used in accordance with the EPA-APPROVED manufacturer's label use instructions at a minimum temperature of 24°C (75°F) with an exposure time of 7 seconds for a chlorine solution and 30 seconds for other chemical SANITIZERS.

7.5.5.3.3 Chemical Sanitizing Concentration (24 C) [3 demerit points]

Sanitizing solutions must be used with the following concentrations:

- A chlorine solution must have a concentration between 50 MG/L (ppm) and 200 MG/L (ppm).
- An iodine solution must have a PH of 5.0 or less or a PH no higher than the level for which the manufacturer specifies the solution is effective AND a concentration between 12.5 MG/L (ppm) and 25 MG/L (ppm).
- A quaternary ammonium compound solution must have a concentration as specified in 40 CFR 180.940 Sanitizing Solutions AND as indicated by the manufacturer's use directions included in the labeling.

If another solution concentration or temperature of a chlorine, iodine, or quaternary ammonium compound is used, the vessel must demonstrate to CSIP that the solution achieves SANITIZATION and the use of the solution must be APPROVED.

If a chemical SANITIZER other than a chlorine, iodine, or quaternary ammonium compound is used, it must be applied in accordance with the manufacturer's use directions included in the labeling.

7.5.5.3.4 Sanitizer Concentration Testing (22) [2 demerit points]

Concentration of the sanitizing solution must be accurately determined by using a test kit or other device.

7.5.6 Protection of Clean Items

7.5.6.1 Drying

7.5.6.1.1 *Air Dried/Drained (28) [2 demerit points]*

After cleaning and sanitizing, EQUIPMENT and UTENSILS must be air dried or ADEQUATELY drained before contact with food. Cleaned, sanitized, and air-dried dishware, glassware, and *UTENSILS may be polished with a clean, dry, lint-free cloth that is maintained clean and dry.*

7.5.6.2 Lubricating and Reassembling

7.5.6.2.1 *Lubricating (28) [2 demerit points]*

Lubricants must be applied to FOOD-CONTACT SURFACES that require lubrication in a manner that does not contaminate FOOD-CONTACT SURFACES.

7.5.6.2.2 *Assembling (28) [2 demerit points]*

EQUIPMENT must be reassembled so that FOOD-CONTACT SURFACES are not contaminated.

7.5.6.3 Storing Equipment, Utensils, Linens, and Single-service and Single-use Articles

7.5.6.3.1 *Storing Protected (28) [2 demerit points]*

Cleaned EQUIPMENT and UTENSILS, laundered LINENS, and SINGLE-SERVICE and SINGLE-USE ARTICLES must be stored

- In a clean, dry location.
- In a location where they are not exposed to splash, dust, or other CONTAMINATION.
- At least 150 millimeters (6 inches) above the deck.

7.5.6.3.2 *Storing Inverted (28) [2 demerit points]*

Clean EQUIPMENT and UTENSILS must be stored

- In a self-draining position that allows air drying.
- Covered or inverted.

7.5.6.3.3 *Preset Tableware (28) [2 demerit points]*

TABLEWARE that is preset longer than 4 hours before the beginning of service must be protected from CONTAMINATION by being wrapped, covered, or inverted.

When TABLEWARE is preset, exposed unused settings must be

- removed at the time a CONSUMER is seated or
- washed, rinsed, and sanitized before further use if the settings are not removed when a CONSUMER is seated.

7.5.6.3.4 *Original Package (28) [2 demerit points]*

SINGLE-SERVICE and SINGLE-USE ARTICLES must be kept in the original protective package or stored by using other means that afford protection from CONTAMINATION until used.

7.5.6.3.5 *Utensil Dispensing (28) [2 demerit points]*

Eating UTENSILS dispensed at a CONSUMER self-service unit such as a buffet or salad bar must be protected from CONTAMINATION.

7.5.7 Laundering

7.5.7.1 Laundry Facilities

7.5.7.1.1 ***Laundry Equipment (28) [2 demerit points]***

If LINENS used in the FOOD AREAS are laundered on the vessel, a mechanical clothes washer and dryer must be provided and used.

7.5.7.1.2 ***Laundry Operations Location (28) [2 demerit points]***

Laundry operations must be located so that the operations are protected from CONTAMINATION and only where there are none of the following: exposed food; clean EQUIPMENT, UTENSILS, and LINENS; or unwrapped SINGLE-SERVICE and SINGLE-USE ARTICLES.

7.5.7.2 Laundry Procedures

7.5.7.2.1 ***Laundry Frequency (28) [2 demerit points]***

LINENS that do not come in direct contact with food must be laundered between operations if they become wet, sticky, or visibly soiled.

7.5.7.2.2 ***Cloth Gloves (28) [2 demerit points]***

Cloth gloves must be laundered before being used with a different type of raw animal food such as beef, lamb, pork, and FISH.

7.5.7.2.3 ***Linens/Napkins (28) [2 demerit points]***

LINENS and napkins used to line food-service containers and cloth napkins must be laundered between each use.

7.5.7.2.4 ***Wet Wiping Cloths (28) [2 demerit points]***

Wet wiping cloths must be laundered daily.

7.5.7.2.5 ***Dry Wiping Cloths (28) [2 demerit points]***

Dry wiping cloths must be laundered as necessary to prevent CONTAMINATION of food and clean serving UTENSILS.

7.5.7.2.6 ***Laundry Procedures (28) [2 demerit points]***

Soiled LINENS must be kept in clean, nonabsorbent receptacles or clean, washable laundry bags and stored and transported to prevent CONTAMINATION of food, clean EQUIPMENT, clean UTENSILS, and SINGLE-SERVICE and SINGLE-USE ARTICLES.

7.5.7.2.7 ***Washing (28) [2 demerit points]***

LINENS must be mechanically washed.

7.6 Poisonous and Toxic Materials

7.6.1 Identification

7.6.1.1 Labeling

7.6.1.1.1 ***Manufacturer Label (31 C) [3 demerit points]***

Original containers of POISONOUS OR TOXIC MATERIALS and PERSONAL-CARE ITEMS must bear a legible manufacturer's label.

7.6.1.1.2 Working Containers (31 C) [3 demerit points]

Working containers used for storing POISONOUS OR TOXIC MATERIALS such as cleaners and SANITIZERS taken from bulk supplies must be clearly and individually identified with the common name of the material.

7.6.2 Operational Supplies and Applications

7.6.2.1 Storage

7.6.2.1.1 Pesticide/Rodenticide Locker (31 C) [3 demerit points]

PESTICIDES, insecticides, and rodenticides must be stored in a locked area of the vessel that is not in a FOOD AREA.

7.6.2.1.2 Cleaning Materials Locker (31 C) [3 demerit points]

POISONOUS OR TOXIC MATERIALS used in FOOD AREA cleaning and maintenance must be stored so they cannot contaminate food, EQUIPMENT, UTENSILS, LINENS, and SINGLE-SERVICE and SINGLE-USE ARTICLES by separating the POISONOUS OR TOXIC MATERIALS by storing in a cleaning materials locker.

7.6.2.1.3 Exemptions

This guideline does not apply to EQUIPMENT and UTENSIL cleaners and SANITIZERS that are stored in WAREWASHING areas for availability and convenience if the materials are stored to prevent CONTAMINATION of food, EQUIPMENT, UTENSILS, LINENS, and SINGLE-SERVICE and SINGLE-USE ARTICLES.

7.6.2.2 Use

7.6.2.2.1 Necessary Materials (31 C) [3 demerit points]

Only POISONOUS OR TOXIC MATERIALS required for the operation and maintenance of a FOOD AREA of the vessel—such as for the cleaning and sanitizing of EQUIPMENT and UTENSILS and the control of insects and rodents—are allowed in the FOOD AREAS of the vessel.

7.6.2.2.2 Use Conditions (31 C) [3 demerit points]

POISONOUS OR TOXIC MATERIALS must be used according to the following:

- LAW and these guidelines.
- Manufacturer's use directions included in labeling (and, for a PESTICIDE, manufacturer's label instructions stating that use is allowed in a FOOD AREA).
- Conditions of certification (if certification is required) for use of the pest-control materials.

7.6.2.2.3 Application (31 C) [3 demerit points]

POISONOUS OR TOXIC MATERIALS must be applied so that:

- A HAZARD to employees or other persons is not constituted.
- CONTAMINATION including toxic residues resulting from

drip, drain, fog, splash, or spray on food; EQUIPMENT; UTENSILS; LINENS; and SINGLE-SERVICE and SINGLE-USE ARTICLES is prevented.

7.6.2.2.4 *Restricted-use Applications (31 C) [3 demerit points]*

When a RESTRICTED-USE PESTICIDE is applied, food, EQUIPMENT, UTENSILS, LINENS, and SINGLE-SERVICE and SINGLE-USE ARTICLES must be removed; covered with impermeable covers; or other precautions taken.

7.6.2.2.5 *Restricted-use Applicator (31 C) [3 demerit points]*

A RESTRICTED-USE PESTICIDE must be applied only by an applicator certified as defined in 7 USC 136(e) Certified Applicator of the Federal Insecticide, Fungicide and Rodenticide Act or a person under the direct supervision of a certified applicator.

7.6.2.2.6 *Equipment Cleaning and Sanitizing (31 C) [3 demerit points]*

Food EQUIPMENT and UTENSILS in the area treated must be cleaned and sanitized after the application.

7.6.2.2.7 *Containers (31 C) [3 demerit points]*

A container previously used to store cleanser, chemicals, or POISONOUS OR TOXIC MATERIALS may not be used to store, transport, or dispense food. Additionally, food containers may not be used to store, transport, or dispense cleanser, chemicals, or POISONOUS OR TOXIC MATERIALS.

7.6.2.3 Sanitizers and Other Food Area Chemicals

7.6.2.3.1 *Sanitizers (31 C) [3 demerit points]*

Chemical SANITIZERS and other chemical antimicrobials applied to FOOD-CONTACT SURFACES must meet the requirements specified in 21 CFR 178.1010 Sanitizing Solutions.

7.6.2.3.2 *Fruit/Vegetable Wash (31 C) [3 demerit points]*

Chemicals used to wash or peel raw whole fruits and vegetables must meet the requirements specified in 21 CFR 173.315 Chemicals Used in Washing or to Assist in the Lye Peeling of Fruits and Vegetables (Annex 13.10).

7.6.2.3.3 *Boiler Water Additives (31 C) [3 demerit points]*

Chemicals used as boiler water ADDITIVES for culinary steam or other FOOD AREA purposes must meet the requirements specified in 21 CFR 173.310 Boiler Water ADDITIVES.

7.6.2.3.4 *Drying Agents (31 C) [3 demerit points]*

Drying agents used in conjunction with SANITIZATION must contain only components that are listed as one of the following:

- Generally recognized as safe for use in food as specified in 21 CFR 182 Substances Generally Recognized as Safe or 21 CFR 184 Direct Food Substances Affirmed as Generally Recognized as Safe.
- Generally recognized as safe for the intended use as

specified in 21 CFR 186 Indirect Food Substances Affirmed as Generally Recognized as Safe.

- APPROVED for use as a drying agent under a prior sanction specified in 21 CFR 181 Prior-Sanctioned Food Ingredients.
- Specifically regulated as an indirect food ADDITIVE for use as a drying agent as specified in 21 CFR Parts 175-178.
- APPROVED for use as a drying agent under the threshold of regulation process established by 21 CFR 170.39 Threshold of Regulation for Substances Used in Food-Contact Articles.

7.6.2.3.5 ***Approved for Use with Chemical Sanitizers (31 C) [3 demerit points]***

Drying agents, when used with chemical SANITIZATION, must be specifically APPROVED for use with chemical sanitizing solutions.

7.6.2.3.6 ***Lubricants (31 C) [3 demerit points]***

Lubricants must meet the requirements specified in 21 CFR 178.3570 Lubricants with Incidental Food-Contact if they are used on FOOD-CONTACT SURFACES; on bearings and gears located on or within FOOD-CONTACT SURFACES; or on bearings and gears that are located so that lubricants may leak, drip, or be forced into food or onto FOOD-CONTACT SURFACES.

7.6.2.4 Pesticides and Rodenticides

7.6.2.4.1 ***Restricted-use Pesticides (31 C) [3 demerit points]***

RESTRICTED-USE PESTICIDES used in FOOD AREAS must meet the requirements specified in 40 CFR 152 Subpart I Classification of Pesticides.

7.6.2.4.2 ***Rodent Bait (31 C) [3 demerit points]***

Rodent bait used in FOOD AREAS must be contained in a covered, tamper-resistant bait station.

7.6.2.4.3 ***Tracking Powder Pesticides (31 C) [3 demerit points]***

A tracking powder PESTICIDE may not be used in a FOOD AREA.

7.6.2.4.4 ***Nontoxic Tracking Powders (19) [2 demerit points]***

A nontoxic tracking powder such as talcum or flour, if used, may not contaminate food.

7.6.2.4.5 ***Prevent Contamination (28) [2 demerit points]***

If a nontoxic tracking powder such as talcum or flour is used, it may not contaminate EQUIPMENT, UTENSILS, LINENS, or SINGLE-SERVICE and SINGLE-USE ARTICLES.

7.6.3 Medicines

7.6.3.1 Restriction and Storage

7.6.3.1.1 Necessary Medicines (31 C) [3 demerit points]

Only medicines necessary for the health of the FOOD EMPLOYEES are allowed in a FOOD AREA.

7.6.3.1.2 Medicines Labeling/Separation (31 C) [3 demerit points]

Medicines in a FOOD AREA for FOOD EMPLOYEES' use must be labeled and be located in an area such as the chef's office to prevent the CONTAMINATION of food, EQUIPMENT, UTENSILS, LINENS, or SINGLE-SERVICE and SINGLE-USE ARTICLES.

7.6.3.1.3 First Aid Supplies (31 C) [3 demerit points]

First aid supplies in a FOOD AREA for FOOD EMPLOYEES' use must be labeled and stored in a kit or a container in a location that prevents the CONTAMINATION of food, EQUIPMENT, UTENSILS, LINENS, or SINGLE-SERVICE and SINGLE-USE ARTICLES.

7.7 Facilities

7.7.1 Handwashing and Toilet Facilities

This applies to toilet facilities for galley personnel even if ACCESSIBLE to other crew members.

7.7.1.1 Handwashing Facility Installation

7.7.1.1.1 Convenient (29 C) [3 demerit points]

Each FOOD PREPARATION AREA, bar, WAREWASHING area, and garbage-processing area must have at least one handwashing facility in it.

7.7.1.1.2 8 Meters/26 Feet (29 C) [3 demerit points]

The handwashing facility must be within 8 meters (26 feet) of all parts of the area and should not be located in an adjacent area that requires passage through a closed door where the user makes hand contact with the door.

Handwash sinks must be at least 750 millimeters (30 inches) above the deck and so that employees do not have to reach excessively to wash their hands.

7.7.1.1.3 Tempered Water (29 C) [3 demerit points]

A handwashing sink must be equipped to provide water at a temperature of at least 38°C (100°F) through a mixing valve or combination faucet. For handwash sinks with electronic sensors, and other types of handwash sinks where the user cannot make temperature adjustments, the temperature provided to the user after the mixing valve must not exceed 49°C (120°F).

7.7.1.1.4 Metered Faucet (30) [1 demerit points]

A self-closing, slow-closing, or metering faucet must provide a flow of water for at least 15 seconds without the need to reactivate the faucet.

7.7.1.1.5 Automatic Systems (30) [1 demerit points]

An automatic handwashing facility must be installed in accordance with manufacturer's instructions.

7.7.1.1.6 Dispenser/Receptacle (30) [1 demerit points]

A handwashing facility must include a sink, soap dispenser, single-use towel dispenser, and waste receptacle.

7.7.1.1.7 Sign (30) [1 demerit points]

A sign stating "WASH HANDS OFTEN", "wash hands frequently" or similar wording in a language that the FOOD EMPLOYEES understand must be posted over handwashing sinks.

7.7.1.2 Toilet Facility Installation

7.7.1.2.1 Convenient (29 C) [3 demerit points]

Toilet rooms must be provided and conveniently located.

7.7.1.2.2 Handwashing Facilities (29 C) [3 demerit points]

Handwashing facilities must be in or immediately adjacent to toilet rooms or vestibules.

7.7.1.2.3 Sign (30) [1 demerit point]

A sign must be conspicuously posted on the bulkhead adjacent to the door of the toilet or on the back of the door. The sign must state "WASH HANDS AFTER USING TOILET" in a language that the FOOD EMPLOYEES understand.

7.7.1.2.4 Enclosed/Doors (30) [1 demerit point]

Toilet rooms must be completely enclosed and must have tight-fitting, self-closing doors that must be kept closed except during cleaning or maintenance.

7.7.1.2.5 Waste Receptacle (30) [1 demerit point]

EASILY CLEANABLE receptacles must be provided for waste materials.

7.7.1.2.6 Unlocked (29 C) [3 demerit points]

Toilet facilities intended for use by galley personnel must not be locked when the galley is in service.

7.7.1.3 Handwashing and Toilet Facility Maintenance

7.7.1.3.1 Accessible (29 C) [3 demerit points]

Handwashing facilities must be used for no other purpose and must be ACCESSIBLE at all times.

7.7.1.3.2 Facilities Clean/Good Repair (30) [1 demerit point]

Handwashing facilities must be kept clean and in good repair.

7.7.1.3.3 Soap/Towels (30) [1 demerit point]

Each handwashing facility must have a supply of hand-cleansing soap or detergent and a supply of single-service paper towels available.

7.7.1.3.4 Toilets Clean/Good Repair (30) [1 demerit point]

Toilet fixtures must be kept clean and in good repair.

7.7.1.3.5 Toilet Tissue (30) [1 demerit point]

A supply of toilet tissue must be provided at each toilet at all times.

7.7.2 Solid Waste

7.7.2.1 Receptacles and Containers

7.7.2.1.1 Containers (32) [1 demerit point]

Receptacles and waste-handling containers for REFUSE and recyclables and for use with materials containing food residue must be durable, nonabsorbent, EASILY CLEANABLE, and leakproof.

7.7.2.1.2 Insect/Rodent Resistant (32) [1 demerit point]

Receptacles and waste-handling containers for REFUSE and recyclables and for use with materials containing food residue must be insect and rodent resistant and must have tight-fitting lids.

7.7.2.1.3 Covered/Provided (32) [1 demerit point]

Receptacles and waste-handling containers must be kept covered when not in continuous use and after they are filled.

7.7.2.1.4 Location (32) [1 demerit point]

A receptacle or waste-handling container must be provided in each area of the vessel or premise where REFUSE is generated or commonly discarded or where recyclables are placed.

7.7.2.1.5 Wash Facilities (32) [1 demerit point]

Facilities suitable for washing receptacles and waste-handling containers must be provided separate from food EQUIPMENT and UTENSIL storage areas or FOOD PREPARATION AREAS.

7.7.2.1.6 Design/Supplies (32) [1 demerit point]

The designated container wash area must be EASILY CLEANABLE and must have tempered water, access to detergent, and suitable drainage.

7.7.2.1.7 Cleaned (32) [1 demerit point]

Receptacles and waste-handling containers must be cleaned when emptied.

7.7.2.2 Garbage and Refuse Storage Room

7.7.2.2.1 Easily Cleanable/Durable (32) [1 demerit point]

The dry and refrigerated garbage and REFUSE storage room must be constructed of EASILY CLEANABLE, corrosion-resistant, nonabsorbent, and durable materials.

7.7.2.2.2 Size (32) [1 demerit point]

The garbage and REFUSE storage room must be large enough to

store and process the garbage and REFUSE.

7.7.2.2.3 *Prevent Contamination (32) [1 demerit point]*

The garbage and REFUSE storage room must be located so as to prevent CONTAMINATION in FOOD PREPARATION, storage, and UTENSIL washing areas.

7.7.2.2.4 *Good Repair/Clean (32) [1 demerit point]*

The garbage and REFUSE storage room must be maintained in good repair and kept clean.

7.7.3 Liquid Waste Disposal and Plumbing

7.7.3.1 Drain Lines

7.7.3.1.1 *Drain Lines (19) [2 demerit points]*

Drain lines from all fixtures; sinks; appliances; compartments; refrigeration units; or devices that are used, designed for, or intended to be used in the a) preparation, b) processing, c) storage, or d) handling of food, ice, or drinks must be indirectly connected to appropriate waste systems by means of an AIR GAP or AIR-BREAK.

Drain lines from handwashing and mop sinks may be directly connected to the appropriate waste system.

7.7.3.1.2 *Overhead (19) [2 demerit points]*

Drain lines carrying SEWAGE or other liquid waste must not pass directly overhead or horizontally through spaces used for the preparation, serving, or storage of food or for the washing or storage of UTENSILS and EQUIPMENT. Drain lines that are unavoidable in these FOOD AREAS must be sleeve-welded and must not have mechanical couplings.

7.7.3.1.3 *Warewash Sink/Machine Drains (28) [2 demerit points]*

All drain lines from WAREWASHING sinks or machines must drain through an AIR GAP or AIR-BREAK to a drain or SCUPPER.

7.7.3.2 Liquid Waste Disposal

7.7.3.2.1 *Discharge (35) [2 demerit points]*

BLACK and GRAY WATER must be discharged to the vessel's wastewater disposal system and must not pool on the deck.

7.7.3.2.2 *Leakage (35) [2 demerit points]*

Leakage of SEWAGE tanks or discharge of SEWAGE into the bilge or other areas on the vessel is prohibited.

7.7.3.3 Plumbing

7.7.3.3.1 *Good Repair (34) [1 demerit point]*

A PLUMBING SYSTEM in a FOOD AREA must be maintained in good repair.

7.7.4 Decks, Bulkheads, and Deckheads

7.7.4.1 Design and Construction

7.7.4.1.1 **Cleanable (33) [1 demerit point]**

Decks, bulkheads, and deckheads in FOOD PREPARATION, WAREWASHING, pantries, bars, and food and EQUIPMENT storage areas must be constructed and maintained for easy cleaning.

Decks may be of nonskid construction provided they are EASILY CLEANABLE.

Carpet is not considered EASILY CLEANABLE and should not be used in these areas.

7.7.4.1.2 **Coving (33) [1 demerit point]**

Bulkhead/deck, EQUIPMENT/deck, cabinet/deck, and DECK SINK coaming/deck junctures must be COVERED (including galleys, pantries, buffets, bars, waiter stations, dining room work counters, provisions, FOOD STORAGE ROOMS, EQUIPMENT/UTENSIL storage rooms, and toilet rooms intended for use by galley personnel).

7.7.4.1.3 **Finishes (33) [1 demerit point]**

Bulkheads and deckheads must have SMOOTH, hard finishes and light colored surfaces. *Exception: bars may have decorative surfaces provided that they are EASILY CLEANABLE.*

7.7.4.1.4 **Corrosion Resistant (33) [1 demerit point]**

Decks, bulkheads, and deckheads in FOOD PREPARATION, WAREWASHING, pantries, and storage areas must be corrosion resistant.

7.7.4.1.5 **Attached Equipment (33) [1 demerit point]**

Light fixtures, vent covers, and similar EQUIPMENT attached to the bulkheads or deckheads must be EASILY CLEANABLE.

7.7.4.1.6 **Exposed Lines (33) [1 demerit point]**

Exposed utility service lines and pipes, including lines for fire detection and protection systems, must be installed so they do not obstruct or prevent cleaning.

7.7.4.1.7 **Cleanable Surfaces (33) [1 demerit point]**

Surfaces subject to routine splashes, spillage, or other soiling during normal use must have EASILY CLEANABLE features.

7.7.4.1.8 **Deck Mats (33) [1 demerit point]**

Mats must be designed to be REMOVABLE and EASILY CLEANABLE.

7.7.4.2 Maintenance

7.7.4.2.1 **Clean (33) [1 demerit point]**

Decks, bulkheads, deckheads, and attached EQUIPMENT in FOOD PREPARATION, WAREWASHING, pantries, and storage areas must be cleaned as often as necessary.

7.7.4.2.2 *Timing (33) [1 demerit point]*

Cleaning must be done during periods when the least amount of food is exposed.

7.7.4.2.3 *Good Repair (33) [1 demerit point]*

Decks, bulkheads, and deckheads in FOOD PREPARATION, WAREWASHING, pantries, and storage areas must be maintained in good repair.

7.7.5 Lighting

7.7.5.1 Intensity

7.7.5.1.1 *220 Lux/20 Foot Candles (36) [1 demerit point]*

The light intensity must be at least 220 lux (20 foot candles) on food preparation surfaces and must be 75 centimeters (30 inches) above the deck in FOOD PREPARATION AREAS, handwashing facilities, WAREWASHING areas, EQUIPMENT, and UTENSIL storage, pantries, toilet rooms, and CONSUMER self-service areas.

7.7.5.1.2 *110 Lux/10 Foot Candles (36) [1 demerit point]*

The light intensity must be at least 110 lux (10 foot candles) at a distance of 75 centimeters (30 inches) above the deck when in use, in walk-in refrigerator units and DRY STORAGE AREAS, and in other areas and rooms during periods of cleaning.

The light intensity must be at least 110 lux (10 foot candles) behind and around mounted EQUIPMENT, including counter-mounted EQUIPMENT.

7.7.5.1.3 *Bars and Waiter Stations (36) [1 demerit point]*

The light intensity must be at least 110 lux (10 foot candles) at handwashing stations in bars. In bars and dining room waiter stations, provide 220 lux (20 foot candles) light intensity during cleaning operations.

7.7.5.2 Protected

7.7.5.2.1 *Shielded/Shatter-resistant (36) [1 demerit point]*

Light bulbs must be shielded, coated, or otherwise shatter resistant in areas where there is exposed food; clean EQUIPMENT, UTENSILS, and LINENS; or unwrapped SINGLE-SERVICE and SINGLE-USE ARTICLES.

7.7.5.2.2 *Heat Lamps (36) [1 demerit point]*

An infrared or other heat lamp must be protected against breakage by a shield surrounding and extending beyond the bulb so that only the face of the bulb is exposed.

7.7.6 Ventilation

7.7.6.1 Design and Operation

7.7.6.1.1 Sufficient (37) [1 demerit point]

All FOOD PREPARATION, WAREWASHING, and toilet rooms must have sufficient ventilation to keep them free of excessive heat, steam, condensation, vapors, obnoxious odors, smoke, and fumes.

7.7.6.1.2 Effective (37) [1 demerit point]

Ventilation hood systems and devices must operate effectively to prevent grease and condensate from collecting on the bulkheads and deckheads and to remove contaminants generated by EQUIPMENT located under them.

7.7.6.1.3 No Contamination (37) [1 demerit point]

Heating, ventilating, and air conditioning systems must be designed and installed so that make-up air intake and exhaust vents do not cause CONTAMINATION of food, FOOD-CONTACT SURFACES, EQUIPMENT, or UTENSILS.

7.7.6.2 Maintenance

7.7.6.2.1 Filters (37) [1 demerit point]

Filters and other grease-extracting EQUIPMENT must be designed to be READILY REMOVABLE for cleaning and replacement if not designed to be CLEANED IN PLACE. Intake and exhaust air ducts must be cleaned and filters changed so they are not a source of CONTAMINATION by dust, dirt, and other materials.

7.7.7 Cleaning Equipment and Unnecessary Articles

7.7.7.1 Storage

7.7.7.1.1 Necessary Articles (38) [1 demerit point]

Only articles necessary for the food service operation must be stored in FOOD PREPARATION, FOOD STORAGE, and WAREWASHING areas.

7.7.7.1.2 Cleaning Locker (38) [1 demerit point]

Maintenance tools such as mops, brooms, and similar items must be stored in a designated locker so they do not contaminate food, FOOD-CONTACT SURFACES of UTENSILS and EQUIPMENT, LINENS, or SINGLE-SERVICE and SINGLE-USE ARTICLES.

7.7.7.1.3 Labeled (38) [1 demerit point]

The locker must be labeled "CLEANING MATERIALS ONLY."

7.7.7.1.4 Orderly Manner (38) [1 demerit point]

Maintenance tools such as mops, brooms, and similar items must be stored in an orderly manner that facilitates cleaning of the area used for storing the maintenance tools.

7.7.7.1.5 Mop Drying (38) [1 demerit point]

After use, mops must be placed in a position that allows them to air dry without soiling walls, EQUIPMENT, or supplies.

7.7.7.1.6 Bucket Storage (38) [1 demerit point]

Wash, rinse, and sanitize buckets or other containers may be stored with maintenance tools provided they are stored inverted and nested.

8.0 Integrated Pest Management (IPM)

This section has two subsections:

- 8.1 Plan Development, Evaluation, and Use of Pesticides
- 8.2 Pest Control
- 8.3 Knowledge

8.1 Plan Development, Evaluation, and Use of Pesticides

8.1.1 IPM Plans

8.1.1.1 IPM Plan (40) [1 demerit point]

Each vessel must have an IPM plan to implement effective monitoring and control strategies for pests aboard the vessel.

8.1.1.2 Monitoring (40) [1 demerit point]

The IPM plan must set a schedule for periodic **active** monitoring inspections, including some at night **or during periods of no or minimal activity**.

8.1.1.3 Logs (40) [1 demerit point]

The IPM plan must include provisions for logs for active monitoring of pest sightings in operational areas of the vessel. The IPM plan also must include provisions for training of crew members in charge of log completion. **The time of the active monitoring inspections must be noted in the log.**

8.1.1.4 Passive Surveillance (40) [1 demerit point]

The IPM plan must include passive surveillance procedures such as glue traps or other **passive** monitoring devices and must include the location of each. A **passive device** monitoring log must be maintained.

8.1.1.5 Action and Follow Up (40) [1 demerit point]

When pests are noted during an inspection, the log must include action taken as well as follow-up inspection results.

8.1.2 Plan Evaluation

8.1.2.1 Evaluation (40) [1 demerit point]

The vessel's IPM plan must be evaluated for effectiveness **periodically** or whenever there is a significant change in the vessel's operation or structure (e.g., renovation).

The evaluation may be required more frequently in areas where pest infestations exist but cannot be controlled.

8.1.2.2 Reviews (40) [1 demerit point]

IPM plan evaluations and changes must be documented in the IPM plan.

8.1.2.3 Inspections (40) [1 demerit point]

The IPM plan, monitoring records, and other documentation must be available for review during inspections.

8.1.3 IPM and Pesticide Use

8.1.3.1 Pesticide Application

8.1.3.1.1 Pesticide Record (40) [1 demerit point]

The IPM plan must include a record of PESTICIDES **used to control pests and vectors**. The record must include only PESTICIDES currently onboard the vessel and those used in the previous 12 months.

8.1.3.1.2 Restricted Use (39 C) [3 demerit points]

A RESTRICTED-USE PESTICIDE must be applied only by a certified applicator or a person with training and testing equivalent to that of a certified applicator.

8.1.3.1.3 Applicator Training (40) [1 demerit point]

Training of the pest-control personnel must be documented.

8.1.3.1.4 Safety (40) [1 demerit point]

The IPM plan must establish health and safety procedures to protect the passengers and crew.

8.2 Pest Control

8.2.1 Exclusion

8.2.1.1 Food Areas

8.2.1.1.1 Effective Control (39 C) [3 demerit points]

The presence of insects, rodents, and other pests must be effectively controlled to minimize their presence in the FOOD STORAGE, preparation, and service areas and WAREWASHING and UTENSIL storage areas aboard a vessel.

8.2.1.1.2 Exclusion (40) [1 demerit point]

Entry points where pests may enter the FOOD AREAS must be protected.

8.2.1.1.3 Incoming Food and Other Supplies (40) [1 demerit point]

Incoming shipments of food and **all other** supplies must be routinely inspected for evidence of insects, rodents, and other pests. A record of these inspections must be maintained onboard the vessel and must be available for review during inspections.

8.2.1.1.4 IPM Inspections (40) [1 demerit point]

All FOOD AREAS must be inspected at a frequency that can quickly detect the evidence of pests, harbourage conditions, **cleanliness**,

and protection of outer openings.

Non-food Areas

Reasonable care must be given to conduct inspections in non-FOOD AREAS for the presence of insects, rodents, and other pests.

The garbage handling areas of the vessel must be inspected at least weekly for the presence of insects, rodents, and other pests. The results of these inspections must be maintained in a log. The inspection results may be included in the log of the FOOD AREA inspections.

8.2.2 Control Measures

8.2.2.1 Chemical

8.2.2.2.1 Chemical Controls (39 C) [3 demerit points]

Chemical control measures must conform to products and application procedures specifically allowed in the food safety section of these guidelines and the vessel's IPM plan.

8.2.2.2 Physical

8.2.2.2.1 Insect-control Devices (40) [1 demerit point]

Insect-control devices that electrocute or stun flying insects are not permitted in FOOD AREAS.

8.2.2.2.2 Food Protection (19) [2 demerit points]

Insect control devices such as insect light traps must not be located over FOOD STORAGE, FOOD PREPARATION AREAS, FOOD SERVICE stations, or clean EQUIPMENT. Dead insects and insect fragments must be prevented from falling on exposed food.

8.2.2.2.3 Utensil Protection (28) [2 demerit points]

Insect-control devices must not be located over WAREWASHING, UTENSIL storage areas, EQUIPMENT, UTENSILS, LINENS, or unwrapped SINGLE-SERVICE or SINGLE-USE ARTICLES. Dead insects and insect fragments must be prevented from falling on clean items.

8.2.2.2.4 Cleaning (40) [1 demerit point]

Dead or trapped insects, rodents, and other pests must be removed from control devices and the vessel at a frequency that prevents their accumulation or decomposition or the attraction of other pests.

8.3 Integrated Pest Management Knowledge

8.3.1 Demonstration of Knowledge (44) [2 demerit points]

The person in charge of IPM operations on the vessel must demonstrate to Health Canada – Cruise Ship Inspection Program (CS/IP) —during inspections and on request—knowledge of IPM operations. The person in charge must demonstrate this knowledge by compliance with this section of these guidelines or by responding correctly to the inspector's questions as they relate to the specific operation. In addition, the person in charge of IPM operations on the vessel must ensure that employees are properly trained to comply with this

9.0 Housekeeping

This section has one subsection:

- 9.1 Outbreak Prevention and Management Procedures
- 9.2 Knowledge

9.1 Outbreak Prevention and Management Procedures

9.1.1 Disinfection

9.1.1.1 Public Areas

9.1.1.1.1 **Continuous Disinfection (41) [2 demerit points]**

When the cumulative proportion of cases of GI among passengers or crew members is 2%, the outbreak management response must include cleaning and disinfecting all public areas, including handrails and restrooms, on a continuous basis.

9.1.1.1.2 **Cabin Cleaning (41) [2 demerit points]**

Cabins that house passengers or crew with GI must be cleaned and disinfected daily while the occupants are ill.

9.1.1.1.3 **Precautionary Measures (41) [2 demerit points]**

Precautionary measures by housekeeping personnel must be taken in consultation with the vessel's medical staff to prevent the spread of GI from cabin to cabin.

9.1.1.1.4 **Example**

Precautionary measures by the housekeeping personnel may include using disposable personal protection EQUIPMENT, including gloves that are changed after each cabin; cleaning cabins with ill passengers or crew after all other cabins; or having specific crew members only clean cabins of ill passengers or crew.

9.1.1.1.5 **Written OPRP (41) [2 demerit points]**

Each vessel must have a written Outbreak Prevention and Response Plan (OPRP) that details standard procedures and policies to specifically address GI onboard. The written OPRP must include the following at a minimum:

- Duties and responsibilities of each department and their staff for all the passenger and crew public areas.
- Steps in outbreak management and control and the trigger for required action at each step.

At a minimum, triggers must address a graduated approach to outbreak management in response to increasing case counts. Additionally, triggers may be based on events, such as reports of public vomiting/diarrhea, increased room service requests, meal or excursion cancellations, missed events, or

others.

Cruise ship GI surveillance data has shown that a 0.45% daily ATTACK RATE is indicative of a pending outbreak.

- DISINFECTANT products or systems used, including the surfaces or items the DISINFECTANTS will be applied to, concentrations, and required contact times. The DISINFECTANT products or systems must be effective against human norovirus or an acceptable surrogate (e.g., caliciviruses).
- Procedures for informing passengers and crew members of the outbreak. This section should address the procedures for notification of passengers embarking the vessel following an outbreak voyage. In the case of an extended voyage separated into segments, such as a world cruise, this requirement applies to passengers embarking for the segment after an outbreak segment.
- Procedures for returning the vessel to normal operating conditions after an outbreak.
- Procedures to protect the passengers and crew from exposure to DISINFECTANTS, if not already included in the vessel's safety management system. At a minimum, this must include
 - Material safety data sheets (MSDSs).
 - Personal protective EQUIPMENT for crew.
 - Health and safety procedures to minimize respiratory and dermal exposures to both passengers and crew.

Additional information, guidance, and supporting documents are in Annex 13.2 and on the VSP Web site (<http://www.cdc.gov/nceh/VSP>).

9.1.1.1.6 Public Toilet Facilities (41) [2 demerit points]

Passenger and crew public toilets (not including food-area toilets) must be provided with a handwashing station that includes the following:

- Hot and cold running water.
- Soap.
- A method to dry hands (e.g., sanitary hand-drying device, paper towels).
- A sign advising users to wash hands (pictograms are acceptable).

9.1.1.1.7 Hands-free Exit (41) [2 demerit points]

Passenger and crew public toilet facilities must be equipped so that persons exiting the toilet room are not required to touch the door handle with bare hands.

Where toilet stalls include handwashing facilities, the bare-hands-free contact must begin in the toilet stall. Toilet facilities

with multiple exits, such as spa dressing rooms, must have bare-hands-free contact at each exit.

This may be accomplished by methods such as locating paper towel dispensers at sinks and waste containers near the room door, installing mechanically operated doors, removing doors, or using other effective means.

9.1.1.1.8 Sign (41) [2 demerit points]

A sign must be posted advising users of toilet facilities to use hand towel, paper towel, or tissue to open the door unless the exit is hands free.

A pictogram that illustrates the correct use and disposal of paper towels as written in section 9.1.1.1.7 may be used in lieu of a sign.

9.2 Integrated Pest Management Knowledge

9.2.1 Demonstration of Knowledge (44) [2 demerit points]

The person in charge of housekeeping operations on the vessel must demonstrate to Health Canada – Cruise Ship Inspection Program (CSIP) — during inspections and on request—knowledge of housekeeping operations. The person in charge must demonstrate this knowledge by compliance with this section of these guidelines or by responding correctly to the inspector's questions as they relate to the specific operation. In addition, the person in charge of housekeeping operations on the vessel must ensure that employees are properly trained to comply with this section of the guidelines in this manual as it relates to their assigned duties.

10.0 Child Activity Centers

This section includes the following subsections:

- 10.1 Diaper Changing
- 10.2 Toilets and Handwashing
- 10.3 Cleaning and DISINFECTION
- 10.4 Exclusions
- 10.5 Knowledge

10.1 Diaper Changing

10.1.1 Diaper-changing Facilities

10.1.1.1 Design

10.1.1.1.1 Diaper Changing (42) [1 demerit point]

If children who wear diapers are accepted in the CHILD ACTIVITY CENTER, diaper changing stations and disposal facilities must be provided.

10.1.1.1.2 Diaper-changing Stations (42) [1 demerit point]

Each station must include the following:

- A changing table that is nonabsorbent, nontoxic, SMOOTH, durable, EASILY CLEANABLE, and designed for diaper changing.
- A supply of disposable diapers, gloves, wipes, table cleanser, and DISINFECTANT.

- An airtight soiled-diaper receptacle.
- An adjacent handwashing station.

10.1.1.1.3 Signs (42) [1 demerit point]

Signs must be posted in the diaper changing area advising handwashing after each diaper change.

10.2 Toilets and Handwashing

10.2.1 Employee Handwashing (42) [1 demerit point]

Vessels constructed to the VSP 2005 Construction Guidelines must have at least one handwashing station separate from the toilet room(s). The handwashing station must be maintained clean and available at all times.

10.2.2 Facilities

10.2.2.1 Design

10.2.2.1.1 Child-size Toilet (42) [1 demerit point]

- If toilet rooms are located in a child-activity center, child-size toilet(s) or child-accessible toilet(s) (child-size seat and step stool) and handwashing facilities must be provided.

- Child-size toilets (to include the toilet seat) must have a maximum height of 280 millimeters (11 inches) and a toilet seat opening no greater than 203 millimeters (8 inches).

- Handwashing sinks must have a maximum height of 560 millimeters (22 inches) above the deck or a step stool must be provided.

10.2.2.1.2 Toilet Supplies (42) [2 demerit points]

Each child's toilet facility must be provided with a supply of toilet tissue, disposable gloves, and sanitary wipes.

10.2.2.1.3 Waste Receptacle (42) [2 demerit points]

An airtight, washable waste receptacle must be conveniently located to dispose of excrement, soiled sanitary wipes, and soiled gloves. Waste materials must be removed from the child-activity center each day.

10.2.2.1.4 Handwashing Supplies (42) [2 demerit points]

Soap, paper towels or air dryers, and a waste towel receptacle must be located at handwashing stations.

10.2.2.1.5 Signs (42) [2 demerit points]

Signs must be posted in children's toilet room advising the providers to wash their hands and the children's hands after assisting children with using the toilet.

10.2.2.1.6 Assistance (42) [2 demerit points]

Children under 6 years old must be assisted in washing their hands in the child-activity center after using the toilet room, before eating, and after otherwise contaminating their hands.

10.2.2.1.7 Separate (42) [2 demerit points]

Separate toilet facilities must be provided for CHILD ACTIVITY CENTER staff. CHILD ACTIVITY CENTER staff must not use the children's toilet facilities. Public toilet facilities are acceptable.

10.2.2.1.8 *Exiting (41) [2 demerit points]*

Toilet rooms must be equipped so that persons exiting the toilet room are not required to handle the door with bare hands.

10.2.2.1.9 *Temperature (42) [2 demerit points]*

The maximum water temperature for a handwashing station must not exceed 43°C (110°F).

10.3 Cleaning and Disinfection

10.3.1 Employee Handwashing

10.3.1.1 When to Wash Hands (12 C) [4 demerit points]

Child care providers must wash their hands before giving food or BEVERAGES to children.

10.3.2 Furnishings and Toys

10.3.2.1 Construction

10.3.2.1.1 *Cleanable (42) [2 demerit points]*

Surfaces of tables, chairs, and other furnishings that children touch with their hands must be cleanable.

10.3.2.1.2 *Condition (42) [2 demerit points]*

Toys used in the child-activity center must be maintained in a clean condition.

10.3.2.2 Procedures

10.3.2.2.1 *Hard Surfaces (42) [2 demerit points]*

Surfaces that children touch with their hands must be cleaned and disinfected daily with products labeled by the manufacturer for that purpose.

10.3.2.2.2 *Toy Cleaning/Ball Pits (42) [2 demerit points]*

Toys used in the CHILD ACTIVITY CENTER must be cleaned and disinfected daily.

Balls used in ball pits/pens must be cleaned when contaminated or at least once per week.

If a CHEMICAL DISINFECTANT is used, toys must be air dried before use.

10.3.2.2.3 *Tables/High Chairs (42) [2 demerit points]*

Tables and high chair trays must be cleaned and disinfected before and after they are used for eating.

10.3.2.2.4 *Decks (42) [2 demerit points]*

Carpeting must be vacuumed daily and must be periodically cleaned when it becomes visibly soiled. Decks must be washed

and disinfected when soiled or at least daily.

10.3.2.2.5 Facility Cleaning/Disinfecting (42) [2 demerit points]

Diaper changing stations, handwashing facilities, and toilet rooms must be cleaned and disinfected daily and when soiled during use.

10.3.2.2.6 Linens Laundered (42) [2 demerit points]

LINENS such as blankets, sheets, and pillow cases must be laundered between each use.

10.4 Exclusions

10.4.1 Children with Infectious Illness

10.4.1.1 Procedures

10.4.1.1.1 Written Guidance (42) [2 demerit points]

Written guidance on symptoms of common childhood infectious illnesses must be posted at the entrance of the CHILD ACTIVITY CENTER.

10.4.1.1.2 Exclusion Policy (42) [2 demerit points]

The CHILD ACTIVITY CENTER must have a written exclusion policy on procedures to be followed when a child develops symptoms of an infectious illness while at the center.

The policy must include a requirement for written clearance from the medical staff before a child with symptoms of infectious illness can be allowed in the CHILD ACTIVITY CENTER.

This policy must be posted at the entrance of the CHILD ACTIVITY CENTER.

10.4.1.1.3 Infectious Illness (42) [2 demerit points]

Children with infectious illness must not be allowed in the CHILD ACTIVITY CENTER without written permission from the vessel's medical staff.

10.5 Child Activity Center Knowledge

10.5.1 Demonstration of Knowledge (44) [2 demerit points]

The person in charge of child activity center operations on the vessel must demonstrate to Health Canada – Cruise Ship Inspection Program (CSIP) during inspections and on request—knowledge of child activity center operations. The person in charge must demonstrate this knowledge by compliance with this section of these guidelines or by responding correctly to the inspector's questions as they relate to the specific operation. In addition, the person in charge of child activity center operations on the vessel must ensure that employees are properly trained to comply with this section of the guidelines in this manual as it relates to their assigned duties.

11.0 Heating, Ventilation, and Air Conditioning (HVAC) Systems, Fountains, Misting Systems, Humidifiers, and Showers

This section includes the following subsections:

- 11.1 HVAC Construction and Maintenance
- 11.2 Fountains, Humidifiers, Misting Systems, and Showers
- 11.3 Knowledge

11.1 HVAC Construction and Maintenance

11.1.1 Construction

11.1.1.1 Condensate Pans (43) [1 demerit point]

Air handling unit condensate drain pans and collection systems must be able to be accessed for inspection, maintenance, and cleaning. Installation of sight windows or other effective methods for full inspection of condensate collection pans must be used when original EQUIPMENT access makes evaluation during operational inspections impractical.

11.1.1.2 Self Draining (43) [1 demerit point]

Condensation collection pans must be self draining.

11.1.1.3 Potable Water [1 demerit point]

Only POTABLE WATER can be used for connections to the HVAC distribution system.

11.1.2 Maintenance

11.1.2.1 Air Handling Units (43) [1 demerit point]

Air handling units must be kept clean.

11.1.2.2 Condensers (43) [1 demerit point]

Evaporative condensers must be inspected at least annually and cleaned as necessary to remove scale and sediment. Cooling coils and condensate pans must be cleaned as necessary to remove dirt and organic material.

11.1.2.3 Inspection and Maintenance Plan (43) [1 demerit point]

Vessels must have a plan to inspect and maintain HVAC systems in accordance with the manufacturer's recommendations and industry standards. The written inspection, cleaning, and maintenance plan for the HVAC system must be maintained on the vessel and available for review during inspections.

Documentation of the inspection, cleaning, and maintenance plan must be available for review during inspections.

An electronic maintenance tracking system is acceptable for both the plan and the documentation if the work description and action completed are available.

11.2 Fountains, Humidifiers, Misting Systems, and Showers

11.2.1 Fountains, Humidifiers, and Misting Systems

11.2.1.1 Water Source

11.2.1.1.1 Sprays (43) [1 demerit point]

Only POTABLE WATER can be used for water sprays, decorative fountains, humidifiers and misting systems. The water must be further treated to avoid microbial buildup in the operation of water sprays, fountains, humidifiers and misting systems.

11.2.1.2 Fountains and Misting Systems

11.2.1.2.1 Clean (43) [1 demerit point]

Decorative fountains and misting systems must be maintained free of *Mycobacterium*, *Legionella*, algae, and mold growth.

For systems installed after the adoption of the (VSP Ops 2011) CSIP 2011 Operations Manual,

- Provide an automated treatment system (halogenation, UV, or other effective DISINFECTANT) to prevent the growth of *Mycobacterium* and *Legionella* in any decorative fountain, misting system, or similar facility.
- Ensure that nozzles are REMOVABLE for cleaning and DISINFECTION.
- Ensure that pipes and reservoirs can be drained when the fountain/system is not in use.

PORTABLE units must be maintained clean.

11.2.1.2.2 Shock Treatment (43) [1 demerit point]

For misting systems and similar facilities,

- Ensure that these systems can also be manually disinfected (halogenation, heat, etc.).
- If heat is used as a DISINFECTANT, ensure that the water temperature, as measured at the misting nozzle, can be maintained at 65°C (149°F) for a minimum of 10 minutes.

11.2.2 Hot-water System and Showers

11.2.2.1 Maintenance

11.2.2.1.1 Hot-water System (43) [1 demerit point]

The potable hot-water system—including shower heads—must be maintained to preclude growth of *Mycobacterium* or *Legionella*.

11.2.2.1.2 Showers (43) [1 demerit point]

Shower heads must be cleaned and disinfected every 6 months. DISINFECTION must be accomplished with an appropriate HALOGEN-based DISINFECTANT at 10 ppm for 60 minutes, or an equivalent CT VALUE.

11.3 Heating, Ventilation, and Air Conditioning (HVAC) Systems, Fountains, Misting Systems, Humidifiers, and Showers Knowledge

11.3.1 Demonstration of Knowledge (44) [2 demerit points]

The person in charge of ventilation operations on the vessel must demonstrate to Health Canada – Cruise Ship Inspection Program (CSIP) —during inspections and on request—knowledge of Heating, Ventilation, and Air Conditioning (HVAC) Systems, Fountains, Misting Systems, Humidifiers, and Showers operations. The person in charge must demonstrate this knowledge by compliance with this section of these guidelines or by responding correctly to the inspector's questions as they relate to the specific operation. In addition, the person in charge of Heating, Ventilation, and Air Conditioning (HVAC) Systems, Fountains, Misting Systems, Humidifiers, and Showers operations on the vessel must ensure that employees are properly trained to comply with this section of the guidelines in this manual as it relates to their assigned duties.