Ministry for Primary Industries
Manatū Ahu Matua

Operational Code

Processing of Seafood Products

1 March 2024

Issued by the Ministry for Primary Industries

New Zealand Government

TITLE

Operational Code: Processing of Seafood Products

COMMENCEMENT

This Operational Code is effective from 1 March 2024

ISSUING BODY

This Operational Code is issued by the Ministry for Primary Industries.

Dated at Wellington this 1st day of March 2024

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Contents

Introduction

This introduction is not part of the Operational Code, but is intended to indicate its general effect.

Purpose

This Operational Code was developed by the New Zealand Seafood Standards Council and the Ministry for Primary Industries (MPI) to assist seafood operators to meet the requirements of the Animal Products Act 1999 (APA).

Background

This Operational Code applies to seafood processors under APA. This update is being carried out to align with the recent update to the Animal Products Notice: Production, Supply and Processing (PSP Notice) on 31 October 2023.

To see further information about the application of HACCP, refer to Part 3 of the Seafood Code of Practice (HACCP Application) and the Generic RMP models for the processing of seafood product, which are still to be updated.

Who should read this Operational Code?

This Operational Code applies to businesses who carry out primary and/or secondary processing of seafood products for human consumption and should be read by:

a) RMP operators;
b) recognised evaluators;
c) recognised verifiers;
d) regulators; and
e) transporters.

Manufacturers of seafood products under the Food Act 2014 operate under a custom Food Control Plan. This Operational Code is a good source of guidance for those manufacturers.

Exclusions

This Operational Code does not apply to:

(1) Activities covered by the Regulated Control Scheme (RCS) and notice for the commercial growing, harvesting, sorting and transporting bivalve molluscan shellfish (BMS) up until the time when the shellfish are received by a wholesaler or retailer or sold direct to the consumer, or undergo primary processing. Refer to the following links for the RCS requirements:

a) Animal Products (Regulated Control Scheme – Bivalve Molluscan Shellfish) Regulations 2006; and
b) Animal Products Notice: Regulated Control Scheme – Bivalve Molluscan Shellfish for Human Consumption.

This Operational Code however, does cover wet storage in a land-based facility and BMS processing under a RMP.

(2) Activities carried out on Limited Processing Fishing Vessels that are covered under the RCS, regulations, notice and operators' guidelines. Refer to the following links for details:

a) Animal Products (Regulated Control Scheme-Limited Processing Fishing Vessels) Regulations 2001;

b) Animal Products Notice: Regulated Control Scheme – Limited Processing Fishing Vessels; and
c) Regulated Control Scheme for Limited Processing Fishing Vessels: Operator Guidelines.

(3) Activities carried out under the Animal Products Notice: Regulated Control Scheme -Transportation and Handling of Products for Export with an Official Assurance.

The Operational Code has been developed based on the New Zealand requirements and does not address overseas market access requirements (OMARs). It forms the basis of the minimum standard for those who wish to export. In some cases reference is made to export requirements but these are notes only and may become out of date.

Why is this important?

Seafood operators are expected to develop and implement their RMP in accordance with this Operational Code. This will:

a) help ensure that relevant regulatory requirements are met;
b) help ensure compliance with acceptable industry practices and procedures; and
c) simplify and reduce the cost of developing an RMP.

Parts of this Operational Code maybe incorporated by reference into an RMP, provided the parts referenced reflect the actual activities that take place within the business. Any incorporated part(s) are then mandatory and legally enforceable.

Document History

This version of the Operational Code is based on the Animal Products Regulations 2021 (AP Reg) issued October 2022 and the Animal Products Notice: Production, Supply and Processing (PSP Notice) issued October 2023.

No.	Version Date	Section Changed	Change(s) Description
0	July 2011		
1	May 2019	All	Technical review. Update content. New format and branding.
2	August 2023	All	Update to reflect the redesigned APA legislation and include minor technical changes to procedures.
3	March 2024	Introduction, Parts 1, 6, 12, 17, 23, and 25.	Minor update to reflect recent changes of the PSP Notice published on 31 October 2023.

Part 1: Structure of Code

1.1 General

(1) This Operational Code is separated into Parts.

(2) Part 1 gives an overview of the content of the Code, definitions and abbreviations, and Part 2 gives an overview of the food safety legislation that applies to seafood processors.

(3) Parts 3 to 27 cover Good Operating Practices (GOP) or supporting systems and process control. Each Part gives requirements and procedures for different aspects of seafood processing. It sets out the regulatory requirements, and acceptable or agreed procedures for meeting the requirements, particularly the AP Regs and the PSP Notice.

The AP Reg 10 requires an RMP to contain sufficient procedures to ensure that GOP is applied and that they contain enough detail that people working under the programme know what to do. These procedures must cover:

a) the control measures to be used to control hazards and other risk factors;
b) any parameters to be met;
c) any monitoring procedures that are to be carried out; and
d) any corrective action procedures that are to be applied in the event of loss of control, including restoring control, identifying and disposition of affected material or product, and any measures to be taken to prevent reoccurrence.

When documenting GOP, the following format is recommended ~~procedures should cover~~:

a) Purpose and scope;
b) Authorities and responsibilities;
c) Materials and equipment (as applicable);
d) Procedures (e.g. control measures, monitoring, corrective action and operator verification);
e) Records; and
f) References to any other relevant documents.

(4) Part 3 of the Seafood Code of Practice and the Generic RMP models for the processing of seafood product show how the principles of HACCP can be applied to seafood products processing. It also covers the identification of risk factors and controls related to the wholesomeness and labelling of seafood products.

1.2 Layout of Parts 3 to 27

Parts 3 to 27 of this Code are generally laid out under the following subheadings:

1.2.1 Purpose and Scope

This describes the contents of the particular GOP and its application. GOP is essential to consistently process seafood that is fit for their intended purpose. It is the foundation for HACCP and of RMPs. The expectation is that GOP is effectively implemented prior to the application of HACCP principles. GOP includes several interacting components such as hygienic practices, process control and quality assurance systems. GOP is usually documented in supporting systems.

1.2.2 Sources of Hazards

This section identifies the sources of hazards that are controlled under the particular GOP measure, and gives examples of hazards associated with each source. This section has not been provided for those GOP measures that do not directly address a particular source of hazard (e.g. traceability, calibration).

1.2.3 Mandatory Requirements

These requirements are mandated by legislation, and must be complied with. They are amended from time to time and it is the operator's responsibility to check for any amendments as this Code may not incorporate the latest amendments. The key pieces of legislation referenced in this Operational Code are:

- Animal Products Regulations 2021 [AP Reg] issued October 2022;
- Animal Products Notice: Production, Supply and Processing [PSP Notice] issued October 2023.

It is important to note that many of the mandatory requirements (e.g. those that are specific and clear in their intent) are not repeated or expanded upon in the Procedures. Also not all relevant legislation under the APA has been included.

1.2.4 Procedures

The procedures are the accepted or industry agreed means of achieving or complying with the mandatory requirements. These procedures cover control, monitoring, corrective action and verification.

Procedures that have a strong regulatory basis are indicated by the term "must", and the relevant law has been cited in square brackets. Operators are expected to comply with the "must" procedures that are applicable to their product and process.

The term "should" has been used to indicate other industry accepted or agreed practices. It is expected that operators will follow these procedures, but they may use alternative approaches.

1.2.5 Guidance

Guidance is presented in a box. It provides explanatory information and options or examples of how to achieve a particular outcome or requirement.

Guidance
Operators do not need to follow the information in the guidance boxes.

1.2.6 Records

This section gives the list of records that the operator should keep.

1.3 Definitions

Act or **APA** means the Animal Products Act 1999 [AP Reg 3]

amenities means facilities such as washrooms, toilets, cafeterias, and locker-rooms that are designated for use by people working in, or present at, premises used for processing animal material or animal product [PSP Notice A1.3]

animal material depot is a facility in which fish (other than bivalve molluscan shellfish) can be stored-prior to processing. Permitted activities in an animal material depot are holding, chilling, refrigeration, application of temporary covers and sedation using veterinary medicines registered for that purpose under the ACVM Act [PSP Notice H1.6]

approved maintenance compound means any maintenance compound that is approved by the Director-General under Regulation 247 [PSP Notice A1.3]

batch means a quantity of fish or fish product of the same type processed under essentially the same conditions during a particular time interval, generally not exceeding 24 hours, i.e. considered to be all products processed between major clean-downs

BMS means all species of bivalve molluscan shellfish (which includes oysters, clams, mussels, pipis, cockles and scallops) [PSP Notice A1.3]

BMS depot means a depot, refrigerated container unit, or other building or structure used for holding BMS in a temperature-controlled environment prior to delivery to a processor, wholesaler, or retailer [BMS RCS Reg 8]

BMS sorting shed means a building or structure where BMS are handled directly after harvesting to enable separation of BMS for farm management, wet storage, relaying, or culling, prior to transport to a processor, wholesaler, or retailer [BMS RCS Reg 8]

calibration means the procedure used for the comparison of a measuring instrument with a standard, under specific conditions, and adjustment of the instrument, if necessary

clean, when used as a verb, means to remove visible contaminants from any surface

clean-in-place (CIP) means cleaning the interior surfaces of pipes, vessels, process equipment, filters and associated fittings, generally without disassembly

control measure means any action and activity that can be used to prevent or eliminate a product safety hazard or reduce it to an acceptable level

corrective action includes an action— [AP Reg 3]

a) to restore control; or
b) to identify any affected animal material or animal product, and—
    i) ensure its fitness for intended purpose; or
    ii) manage its disposal; or
c) to prevent recurrence of a loss of control [AP Reg 3]

critical non-compliance means, in relation to a breach of a regulatory requirement, a breach that makes it reasonably likely that 1 or more of the following may occur: [AP Reg 3]

a) animal or human health is adversely affected:
b) access to overseas markets is jeopardised:
c) the integrity of the official assurance system is threatened:
d) the integrity of test results is threatened [Ap Reg 3]

depuration, in relation to BMS, means the reduction of the level of contaminants in live BMS by the use of a managed aquatic environment as the treatment process [PSP Notice A1.3]

equipment includes —

a) the whole or any part of any utensil, machine, fitting, device, instrument, stamp, apparatus, table, or article, that is used or available for use in or for the preparing, marking, processing, packing, storing, carrying, or handling of any animal material, animal product, ingredient, additive, or processing aid; and
b) any utensil or machine used or capable of being used in the cleaning of any equipment or facilities

essential services includes gases for processing, lighting, refrigeration, ventilation, water, waste management, and other services essential to the production or processing and handling of animal material and animal product [AP Reg 3]

exposed, ready-to-eat animal product means a ready-to-eat animal product that has the potential to be contaminated by any *Listeria* present in a high-care area before it is packaged

facilities includes amenities, storage areas, and processing areas

fish means finfish and shellfish [APA Section 4]

Guidance

Fish is often referred to as seafood. Fish also includes freshwater species and terrestrial snails.

finfish has the same meaning as in the Fisheries Act 1996 [APA Section 4]. **Finfish** is defined in the Fisheries Act to include all species of the classes Agnatha, Chondrichthyes, and Osteichthyes, at any stage of their life history, whether living or dead

growing area means any coastal marine area, and any land-based aquaculture facility used for the cultivation of BMS for commercial purposes, that — [BMS RCS Reg 8]

a) contains natural deposits of BMS harvested for commercial purposes; or
b) is used for cultivation of BMS for commercial purposes

harvest means the act of removing BMS, for wet storage, relay, retail sale, wholesale, or processing, from a growing area and its placement on or in a harvest vessel, vehicle or container [BMS RCS Reg 8]

harvest declaration means the written declaration of the harvest details of BMS, as required by clause 11.8 of the Animal Products Notice: Regulated Control Scheme – Bivalve Molluscan Shellfish for Human Consumption

hazard means a biological, chemical, or physical agent that—

a) is in or has the potential to be in animal material or product, or is or has the potential to be a condition of animal material or product; and
b) leads or could lead to an adverse health effect on humans or animals [APA Section 4]

high-care area means any area used for processing ready-to-eat animal product after a listericidal process but while there is still potential for it to be contaminated by *L. monocytogenes*, whether after a critical control point for *L. monocytogenes* or after the final microbiological hurdle has been applied [PSP Notice L3.2]

hygiene environment means the zones where ready-to-eat (RTE) seafood product is processed.

a) High-care area (zones 3 and 4) means those zones (rooms) of a seafood operation after the final *L. monocytogenes* control step, or where there is no *L. monocytogenes* control step, where RTE seafood can be exposed to potential contamination from equipment, the environment, handling or ingredients incorporated into the product
b) Standard hygiene environment (zone 2) means all internal zones (rooms) of a seafood operation that are not part of the high-care area, e.g. where initial preparation occurs, process zones for protected product such as dry stores, raw product chillers/storage zones, amenities, etc.
c) Non-processing environment (zone 1) means those zones outside of a seafood premises

ingredient means any substance, including a food additive, used in the processing of food

intermittent processing means processing that occurs from time to time or is periodic and not more than four days processing in any working week. For example, two days during the 1st week, one day the 2nd week and three days the following week, etc.

ISO 17025 standard means the current edition of ISO/IEC 17025 "General requirements for the competence of testing and calibration laboratories"

label includes any written, pictorial, or other descriptive matter that— [AP Reg 3]

a) relates to any animal material or animal product; and
b) appears on, is attached to, or is associated with that animal material or animal product, or its packaging [AP Reg 3]

listericidal process means a process (for example heat treatment or high-pressure processing) that reduces counts of *Listeria monocytogenes* to a safe level [PSP Notice L3.2]

lot means a quantity of seafood material or seafood product that has been produced and handled under uniform conditions and within a limited period of time

lot identification means an identifier that is sufficient to enable the source of a lot to be traced

maintenance compound means any compound used— [AP Reg 3]

a) for maintaining, repairing, servicing, cleaning, or sanitising equipment or surfaces that may be a source of contamination of animal material or animal product; or
b) for treating water; or
c) for controlling pests; or
d) for the personal hygiene of people; or
e) on live animals, other than for their therapeutic benefit, to improve, or maintain, or both, the hygiene and suitability of animal material for processing [AP Reg 3]

monitoring means the act of conducting a planned sequence of observations or measurements of control parameters to assess whether an operation or activity is carried out effectively and/or assess whether a CCP is under control

non-conforming, in relation to animal material or animal product, means any material or product that is known— [AP Reg 3]

a) not to meet regulatory requirements; or
b) not to have been processed in accordance with regulatory requirements [Ap Reg 3]

on hold means that the product is retained within control of the operator, has not yet entered the retail distribution chain or been dispatched from New Zealand. It does not necessarily mean it is being held at the site of processing

own-source water means water other than town-supply water, seawater, or reused or recovered water [PSP Notice A1.3]

operator, in relation to an animal product business, means the owner or other person in control of the business [APA Section 4]

operator verification means verification of the sort required by Regulation 22 to be done by the operator of an RMP [PSP Notice A1.3]

packaging— [AP Reg 3]

a) includes inner and outer packaging of any kind; but
b) does not include bulk cargo containers

pathogen means an organism such as bacteria (e.g. *Salmonella* spp.), viruses (e.g. norovirus, hepatitis A virus), or parasites (e.g. Giardia, Cryptosporidium) that may cause illness [BMS RCS Notice 1.2]

periodic declaration means a declaration made under section 81A of the Act by a person who intends to supply animals or animal material for primary processing over a period specified in the declaration (see clause H1.4 (periodic declarations for farmed fish)) [PSP Notice A1.3]

processing area is an area where unprotected (exposed) product is processed or packed or temporarily held

product contact surface means a surface in a high-care area that ready-to-eat animal product comes in contact with before it is packaged [PSP Notice L3.2]

protective clothing means special garments intended to preclude the contamination of animal material or animal product that are used as outer wear by persons; and includes head coverings and footwear

product support areas are areas where ingredients, packaging, chemicals (including approved maintenance compounds), protective clothing, or processing equipment may be stored, cleaned, transferred through and/or prepared

relay means to transfer BMS from a growing area to another growing area for the purpose of reducing pathogens or other contaminants by using the ambient coastal marine area environment or a land-based aquaculture facility as the treatment process [BMS RCS Reg 8]

repacking means, in relation to bivalve molluscan shellfish, the process of removing shucked bivalve molluscan shellfish from the package and placing them in another package

sanitise means to disinfect, or to otherwise reduce or maintain microbial contamination to or at a level that avoids the creation of a hazard, by the application of maintenance compounds or other things (such as steam or light) [PSP Notice A1.3]

seafood product includes whole and processed fish and fish product

shellfish has the same meaning as in the Fisheries Act 1996 [APA Section 4]. Shellfish is defined in the Fisheries Act to include all species of the phylum Echinodermata and phylum Mollusca and all species of the class Crustacea at any stage of their life history, whether living or dead

shellstock means live bivalve molluscan shellfish in the shell [PSP Notice H3.2(1)]

stated shelf life means the period of time in which a product remains safe and suitable under the intended conditions of distribution, storage and use, as indicated by the date mark

suitably skilled person means a person who, in the opinion of the relevant processor or operator, is skilled in a particular activity or task through training, experience, or qualifications [PSP Notice A1.3]

supplier declaration means a declaration made under section 81A of the Act that relates to a specific consignment of animals or animal material intended to be supplied for primary processing [PSP Notice A1.3]

town-supply water means water supplied via a reticulated water supply that provides drinking water to the public [PSP Notice A1.3]

transport includes transport by road, rail, sea or air

transportation unit means a shipping container, compartment, wagon, or other thing that forms or is designed to form part of, or is attached to, a vehicle or vessel and is used to transport animal material and animal product between places or premises within New Zealand [PSP Notice A1.3]

transporter means any person or business that engages in the transport of animal material (other than live animals prior to primary processing) or animal product between places or premises within New Zealand, and may include couriers and subcontractors who are used intermittently [PSP Notice A1.3]

vulnerable population means a population comprising children under 5 years of age, people over 65 years of age, pregnant women and people with compromised immune systems [PSP Notice L3.2]

waste means any unwanted animal material, animal product, or associated things, including solids, liquids, and gases [AP Reg 3]

withholding period, in relation to veterinary medicines, means the minimum period that must elapse between the last treatment of an animal with a veterinary medicine and the presentation of the animal for primary processing, in order for residues of the veterinary medicine in the animal material to meet the relevant residue threshold [PSP Notice A1.3]

wet storage means the transfer and temporary storage of BMS from a growing area to another growing area for the purposes of desanding, conditioning, or storage, prior to harvest for retail sale, wholesale, or processing [BMS RCS Reg 8]

whole fish means fish that have not been subjected to gutting, scaling, shelling, deheading, tailing, or any other form of processing (other than chilling, washing or packing)

working day means a normal processing day by the operator producing seafood products

zone means the specific area of a seafood operation that is determined based on the potential risk of contaminating the food product to human health hazards and the opportunity to eliminate or inactivate hazard.

a) **zone 1** means the non-processing environment of a seafood operation
b) **zone 2** means the standard hygiene environment of a seafood operation
c) **zone 3** means the non-product contact surfaces in the high-care area of a seafood operation
d) **zone 4** means product contact surfaces (only) within the high-care area of a seafood operation.

1.4 Abbreviations

AMD means animal material depot

AP Reg means the Animal Products Regulations 2021

APA means Animal Products Act 1999

APC means aerobic plate count

AS/NZS means Joint Australian and New Zealand Standards

ATP means adenosine triphosphate

BMS means bivalve molluscan shellfish

BMS RCS Notice means the Animal Products Notice: Regulated Control Scheme – Bivalve Molluscan Shellfish for Human Consumption

BMS RCS Reg means the Animal Products (Regulated Control Scheme – Bivalve Molluscan Shellfish) Regulations 2006

CATR means continuous automatic temperature recording device

EEZ means exclusive economic zone

EN means European standards

ETP means environmental testing procedure

EU means European Union

FCP means food control plan

FSC means the Australia New Zealand Food Standards Code

GOP means Good Operating Practice

HACCP means Hazard Analysis and Critical Control Point

MAV means maximum acceptable value

MPI means the Ministry for Primary Industries

MPL means maximum permissible level

MRL means maximum residue limit

NP means national programme

NZQA mean New Zealand Qualifications Authority

NZSSC means the New Zealand Seafood Standards Council

OAS means the Animal Products Notice: Official Assurances Specifications for Animal Material and Animal Products

OC means Operational Code

OMAR means Overseas Market Access Requirements

PSP means paralytic shellfish poison

PSP Notice means the Animal Products Notice: Production, Supply and Processing

PST means paralytic shellfish toxins

PT means product testing

PTP means product testing procedure

RCS means regulated control scheme

RMP means risk management programme

RTE means ready-to-eat

US means the United States of America

Part 2: Overview of the APA and the Food Act 2014

(1) The APA provides New Zealand's legal framework for the processing of animal products for human and animal consumption, and for some other purposes. It establishes a risk management system that requires all animal product traded and used to be "fit for its intended purpose". The APA sets out the duties of the operator and the requirements related to RMPs, RCSs, and exporter controls.

(2) The Food Act 2014 provides the equivalent regulatory framework for processing food for human consumption. Generally, if processing animal products that are not intended for export, the Food Act can be applied after the completion of primary processing. The risk management measures under the Food Act are:

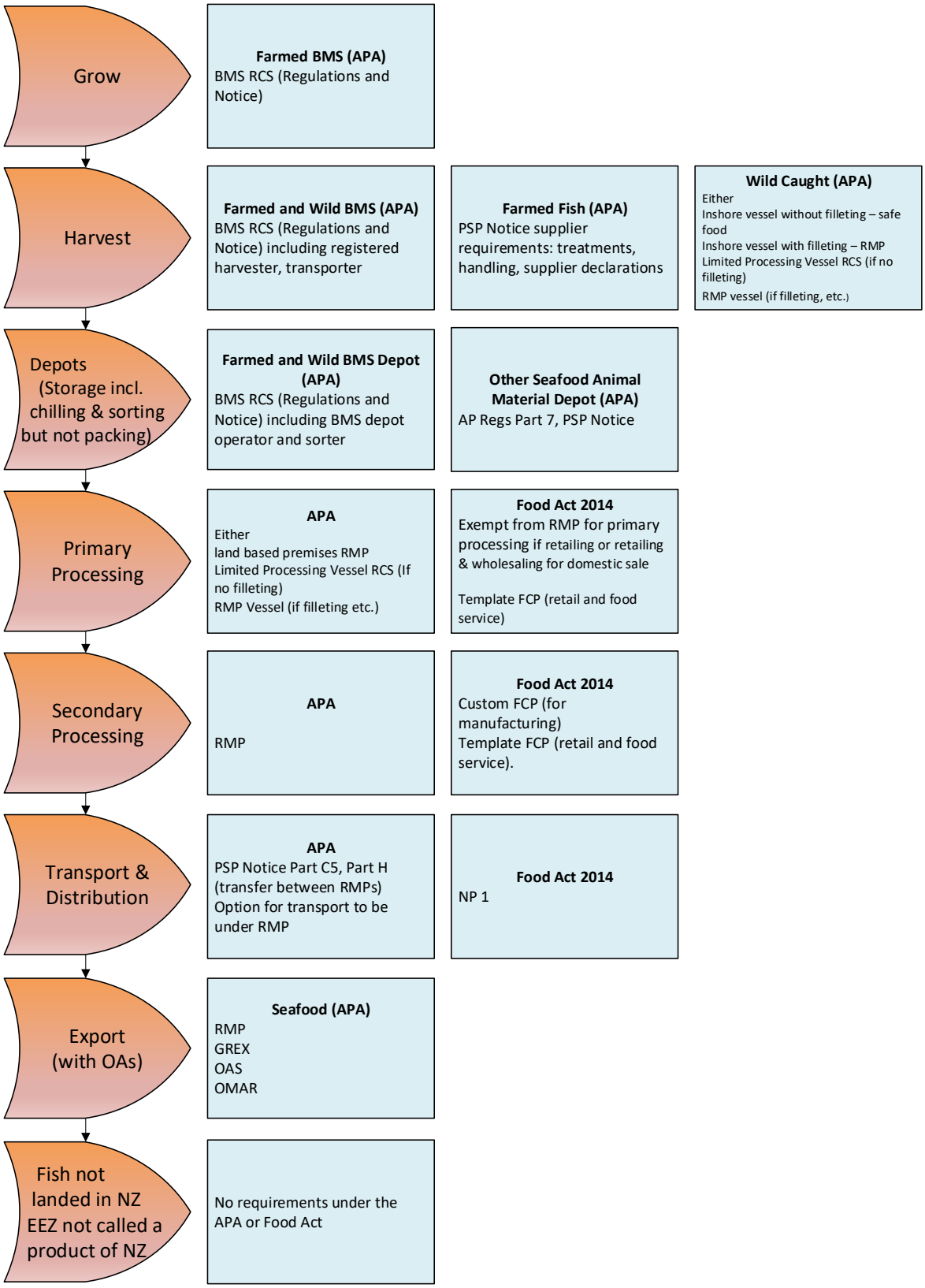
a) Food Control Plans (FCPs), which are equivalent to RMPs; and
b) National Programmes (NPs), which are a set of food safety rules for medium and low risk businesses.

2.1 Which Risk Management Measure Applies?

(1) A variety of risk management measures are available for seafood operators under the APA and/or the Food Act (see Figure 1). The best measure to apply depends on the activities you carry out or the part of the food chain the business operates in. The measures include:

a) listing under the APA;
b) RCSs under the APA (which may require some documentation for compliance);
c) template RMPs or FCPs;
d) fully customised RMPs or FCPs; or
e) NPs under the Food Act.

Figure 1: Which risk management measure applies?



2.1.1 Do you need to operate under the APA?

(1) When deciding on which risk management measure applies to your business, the definition of primary processor under the APA[1] is important. Depending on whether you process on land or at sea, the operations that are included as primary processing differ.

(2) If you primary process, you will most likely need to operate under a RMP. Exceptions to this are described in section 2.1.2.

(3) Primary processing in a **land** based premises occurs at a place where:

a) the first methodical assessment of the fish for processing is made; and
b) the fish are processed.

(4) If processing in a **land-based premises**, the following operations are primary processing:

a) de-sliming, beheading, gutting, or filleting of finfish;
b) tubing of squid;
c) wet-storage, depuration, or shucking of shellfish;
d) collection (e.g. roe, ling sounds);
e) holding live crustaceans (otherwise than in a marine farming operation), or tailing crustaceans; and
f) for fish to be sold whole or after processing at sea, any steps (including washing, chilling, freezing, or packing) taken to ensure delivery of the fish to a buyer in good condition.

(5) If processing **at sea**, the following operations are primary processing:

a) the filleting of finfish (but not just their deheading, gutting, or scaling); and
b) for fish processed at sea and intended for export but that are not delivered to an on-shore primary processor, any other process normally applied to fish, including —

i) washing, chilling, freezing, and preserving;
ii) deheading, gutting, scaling, and tubing; and
iii) packing, transport, and storage.

Guidance

If fishing vessels land their catch to a land-based premises they can carry out the activities in 2.1.1 (5)b) such as washing, chilling freezing and preserving and these are not defined as primary processing, and so do not need to occur under an RMP for the vessel.

If these fishing vessels land their catch to EU listed RMP premises and EU eligibility is required for the fish, the vessel does not need an RMP, but it must be EU listed.

(6) Secondary processors of seafood products for sale on the domestic market do not need to have a RMP but will need to operate under the Food Act (see 2.1.2).

(7) Secondary processors of seafood products for export are also not required to have a RMP. However, it is usually needed to comply with overseas market access requirements (OMARs) and to obtain official assurances (OAs) for the products.

2.1.2 Exemptions from a RMP

(1) If no fish are exported (including no export to Australia), primary processing can be carried out under a FCP under the Food Act 2014 instead of a RMP, provided they sell fish by retail, or retail and wholesale from the same premises.

But if the business sells fish by wholesale only, a RMP is required for their primary processing.

[1] Animal Products Definition of Primary Processor Notice 2000, clauses 7 and 8.

(2) A RMP is also not required for those who [AP Reg 41]:

a) operate a fish animal material depot;
b) only process fish bait, fish berley, chum or ground bait;
c) operate fishing boats where the fish is not landed in New Zealand **or claimed to be a product of New Zealand**; or
d) catch or carry out limited processing (such as chilling, washing, and storage) or sell whitebait for consumption or processing.

2.2 Risk Management Programmes

(1) A RMP is a documented programme that identifies and manage hazards and other risk factors in relation to the production and processing of animal material and animal products, to ensure that the animal product is fit for its intended purpose.

(2) The risk factors that must be considered are:

a) risks from hazards to human and animal health;
b) risks from false or misleading labelling; and
c) risks to the wholesomeness of animal material or product.

(3) A registered RMP is "legally binding" and must be developed and implemented in accordance with relevant New Zealand legislation.

(4) MPI does not require overseas market access requirements to be part of a seafood RMP.

(5) For more detail refer to the Risk Management Programme Manual.

2.2.1 Exporter Controls

(1) Exporters of seafood products must register with MPI. They must export in accordance with the APA and where necessary meet the market access requirements of foreign governments that are additional to the New Zealand requirements.

(2) Operators need to be aware of the export requirements and ensure that their documented systems include procedures and records necessary to demonstrate compliance with all relevant requirements notified in the Animal Products Notice: Official Assurance Specifications for Animal Material and Animal Products, and the OMARS for the intended markets.

(3) For more information about exporting, refer to the "export" tab on the MPI website.

2.2.2 Recognised agencies and person, Duties and Offences

(1) Under the APA, agencies and persons are recognised to evaluate and externally verify RMPs.

(2) MPI maintains a public register of all recognised agencies and recognised persons. This is available on the MPI website by searching on registers and lists.

(3) The APA imposes duties on these key persons. It is a legal requirement to comply with the duties:

a) operators of RMPs (section 16 of the APA);
b) exporters (section 51 of the APA);
c) recognised agencies (section 106 of the APA); and
d) recognised persons (section 107 of the APA).

(4) The APA also provides for penalties to be applied when an offence occurs (see Part 10 of the APA).

2.3 Other Legislation

(1) Operators are responsible for compliance with all other relevant legislation. Examples include:

a) Food Act 2014;
b) Australia New Zealand Food Standards Code;
c) Agricultural Compounds and Veterinary Medicines Act 1997;
d) Biosecurity Act 1993;
e) Fair Trading Act 1986;
f) Resource Management Act 1991;
g) Fisheries Act 1996;
h) Animal Welfare Act 1999;
i) Weights and Measures Act 1987.

2.4 Other Information

(1) Further information is available on the seafood part of the MPI website.

(2) Other general information can be found at the following links:

a) Animal Products – General;
b) Risk Management Programmes (RMPs);
c) Exporting Seafood;
d) Food safety (including science reports);
e) Hazard database; and
f) Food Act.

(3) The Seafood Standards Council website has a number of publications that are useful when developing and operating a RMP, including:

a) Operator Verification: A Guideline for the Seafood Industry;
b) Histamine. A Guideline for the Seafood Industry;
c) Damaged packaging: Prevention and Management: A Guideline for the Seafood Industry; and
d) Traceability: A Guideline for the Seafood Industry.

(4) Information about fisheries management and the rules for commercial fishers and aquaculture operations is available at Fisheries New Zealand (MPI website).

Part 3: Design, Construction and Maintenance of Buildings, Vessels, Facilities and Equipment

3.1 Purpose and Scope

To ensure that all buildings, vessels, facilities and equipment are designed, constructed, installed and operated in a manner that prevents or minimises contamination of seafood products, packaging, equipment, and the processing environment.

3.2 Sources of Hazards

Source	Examples of hazards
Facilities, equipment	Microbiological pathogens (e.g. *Listeria monocytogenes*, *Salmonella* spp., *E.coli* spp., viruses) Chemical residues (e.g. cleaning chemicals, hydraulic fluids, heating or cooling fluids) Physical hazards (e.g. metal, glass, hard plastics)
Maintenance compounds (e.g. lubricating fluids)	Chemical residues
Environmental contaminants (e.g. dust, fumes, pollutants, sewage)	Microbiological pathogens (e.g. *Listeria monocytogenes, Salmonella* spp., *E. coli* spp., *Clostridium* spp., viruses) Chemical residues (e.g. agricultural chemicals)

3.3 Mandatory Requirements

AP Reg 42 How premises, etc, must be designed, located, and constructed

(1) The operator of a risk management programme must ensure that premises, places, facilities, equipment, and essential services are located, designed, and constructed so that—

a) animal material is suitable for processing; and
b) animal products are fit for their intended purpose.

(2) For the purposes of subclause (1), the operator must have regard to the following:

a) the animal material or animal product to be processed or produced:
b) the nature of the processes or activities involved:
c) holding or storage requirements, or both:
d) the capacity required for processing or activities to be carried out:
e) the surrounds and external areas:
f) the proximity to other operations.

AP Reg 43 How premises, etc, must be operated

(1) The operator of a risk management programme must ensure that premises, places, facilities, equipment, and essential services are operated in a manner that minimises and manages the exposure of animal material, animal product, or other input to risk factors.

(2) For the purposes of subclause (1), the operator must have regard to the following:

a) the animal material or animal product to be processed or produced; and

b) the operational capability and capacity of the premises or places, facilities, equipment, and essential services.

AP Reg 45 Operation of essential services

The operator of a risk management programme must ensure that—

a) all essential services are managed to minimise contamination of animal material and animal product; and
b) lighting is of sufficient intensity to enable satisfactory performance of all activities in the processing environment; and
c) ventilation is sufficient to manage air temperature or pressure and condensation or humidity.

PSP Notice C1.2 – Design of premises and equipment [relevant clauses]

(1) Premises and equipment must be designed and constructed in such a way as to minimise or adequately manage any potential adverse impacts on animal material or animal product from things such as pest infestation, flooding, strong or objectionable odours, smoke, dust, fumes, or other contaminants.

(2) The design and construction of premises and equipment must ensure the premises and equipment:

a) are accessible for maintenance, cleaning, operation, monitoring, inspection and verification; and
b) minimise the contact of contaminants with any animal material or animal product, or with any other input or thing used in processing animal material or animal product; and
c) prevent access by, and the harbouring of, pests; and
d) prevent the accumulation of contaminants; and
e) enable wastes to be removed, including through adequate drainage, without affecting processing activities.

(3) Premises must be provided with the facilities and equipment necessary to ensure that the hygiene of premises,equipment, and personnel is maintained and the suitability of animal material and the fitness for intended purpose of animal product are not adversely affected.

(4) Storage facilities for animal material, animal product, and other inputs must enable the animal material, animal product, and other inputs, to be:

a) effectively protected from contamination during storage; and
b) stored in an environment that minimises deterioration (such as by appropriate temperature and humidity control).

(5) Vehicle access and parking areas at premises must be designed and constructed to prevent contamination of processing areas.

(6) The internal design and layout of premises must permit appropriate practices that protect against cross contamination of animal material and animal product.

(7) The working space provided must be sufficient to:

a) allow for appropriate processing activity and the monitoring and verification of that activity; and
b) minimise the risk of contamination and deterioration of animal material and animal product before and during processing.

PSP Notice H2.2 – Design and construction

(1) Fishing vessels that catch and process fish for human consumption must have landing areas designed and constructed to enable water to drain readily and enable effective cleaning and, where necessary, sanitisation.

(2) Fishing vessels must have facilities for storing fish under iced, chilled, or frozen conditions, except where all fish on board are live fish.

(3) If fish or fish products on board are held under ice, the holds or containers must be constructed so that meltwater can be drained.

(4) In this clause, landing area means an area on board a fishing vessel that is used for taking fish on board, including the fish catching equipment and landing deck.

PSP Notice C1.3 – Materials [relevant clauses]

(1) This clause applies to materials that may affect the suitability of animal material or the fitness for intended purpose of animal product and are used for:

a) the exposed internal surfaces of premises (such as walls, floors, and ceilings); and
b) the surfaces of equipment.

(2) The materials must (to the extent necessary to ensure that they will not harbour contaminants or be a source of contaminants):

a) be impervious, non-absorbent, and resistant to the effects of corrosive substances with which they are likely to come into contact; and
b) be free from depressions, pits, cracks, and crevices that may harbour contaminants; and
c) have no toxic effect when used; and
d) be able to be cleaned, and where necessary, sanitised; and
e) be durable, resistant to fracture, and capable of withstanding repeated exposure to normal cleaning and sanitising; and
f) minimise the accumulation of condensation; and
g) be of a colour that is not intended to disguise contaminants (having regard to the lighting arrangements and type of processing being carried out).

PSP Notice C1.4 – Temperature-controlled processing facilities and equipment [relevant clauses]

(1) All temperature-controlled facilities and equipment (such as those used to cool, freeze, temper, or heat animal material or animal product) must be designed to:

a) consistently deliver the temperatures required by this Notice or any relevant RMP; and
b) achieve and maintain the required temperatures as rapidly as necessary for relevant processes.

(2) All temperature-controlled processing facilities and equipment must be operated within their design capability and capacity.

PSP Notice C1.11 – Waste [relevant clauses]

(3) Waste storage areas at premises must be:

a) identified or identifiable; and
b) clearly separated from any stored animal material, animal products, or other inputs.

(4) Implements and equipment used for collecting, storing, or treating waste must be:

a) identified or identifiable as for use only with waste; and
b) stored when not in use in a designated area.

(5) This clause supplements the requirements of Regulation 47.

PSP Notice C1.25 – Lighting [relevant clauses]

(1) Light fittings must be designed, constructed, and located to avoid them being a source of contamination, including in the event of a breakage.

PSP Notice C1.26 – Ventilation

(1) Natural or mechanical ventilation must be adequate to maintain air temperature and relative humidity at a level that ensures that:

a) animal material and animal product is not adversely affected; and
b) personnel required to work in the area are not affected in a way that could adversely affect the animal material or animal product.

(2) Air pressure differential between areas is maintained when positive pressure is required within a processing area.

(3) Filtration systems used for ventilation and product contact air must be maintained to ensure adequate ongoing performance of the system.

(4) This clause supplements the requirements of Regulation 45.

PSP Notice C1.27 – Process gases [relevant clauses]

(1) Process gases, (including compressed air) that come into direct or indirect contact with, or could affect, animal material or animal product in processing premises must:

a) be fit for purpose at the point of use; and
b) not compromise the fitness for intended purpose of the animal material or animal product being processed.

(2) If compressed air is generated on site for the purpose of processing and comes into direct or indirect contact with animal material or animal product:

a) the source air must be filtered to remove any contaminants that may affect the suitability for processing of animal material or the fitness for intended purpose of animal product; and
b) the cleanliness of the source must be within the capability of the filtration system.

(3) This clause supplements the requirements of Regulation 45.

3.4 Procedures

[AP Reg 42, PSP Notice C1.2, C1.3 & C1.5]

3.4.1 Site

(1) Potential sources of contamination must be considered when deciding where to locate the premises, and assess the effectiveness of any reasonable measures that might be taken to protect the product.

Guidance

Ideally, premises should be located away from areas that are on-going sources of contamination. Operators should avoid areas that are:

- environmentally polluted;
- sites for industrial activities that pose a serious threat of contamination;
- subject to flooding, unless sufficient safeguards are provided;
- prone to infestation of pests; and
- situated so that wastes, either solid or liquid, cannot be effectively removed.

(2) If they could be a source of contamination to animal material or animal product, transport access ways, and areas between and around buildings, must be constructed and maintained so that they drain surface water, and minimise dust and other environmental contamination.

Guidance

These areas should be concreted or suitably sealed to minimise contamination and allow for easy cleaning. Operators should also consider how they will protect product from adverse environmental conditions when moving it between buildings, for example by installing canopies overhead or providing covers.

3.4.2 Buildings and Facilities

(1) Adequate facilities must be available for:

a) the hygienic performance of all operations;
b) storage of products, packaging, ingredients, cleaning materials, maintenance compounds, and other materials;
c) storage and distribution of water;
d) cleaning and where appropriate, sanitation of facilities and equipment;
e) personnel hygiene (e.g. toilets, hand washing units, changing facilities); and
f) effective drainage and disposal of wastes.

(2) Adequate working space must be provided to allow for:

a) the hygienic performance of all operations;
b) access of personnel;
c) installation of equipment;
d) effective cleaning; and
e) storage of, and access to, materials.

(3) Internal structures of buildings, including floors, ceilings and walls, must be designed and constructed in a manner that:

a) minimises contamination of the product;
b) facilitates cleaning and maintenance;
c) minimises the entrance and harbourage of pests; and
d) minimises the entry of environmental contaminants.

Guidance

Personnel making decisions on design and construction should be suitably qualified. Guidance may be sought from local authorities or organisations (e.g. the Master Builders Association) regarding qualifications of contractors.

The European Hygienic Engineering and Design Group (EHEDG) have developed a number of guidelines about best practice of building design and alterations. These include:

- Doc. 44 – Hygienic Design Principles for Food Factories, First edition, September 2014;
- Doc. 47 – Guidelines on Air Handling Systems in the Food Industry - Air Quality Control for Building Ventilation, First edition, September 2016;
- Doc. 49 – Hygienic Design Requirements for Processing of Fresh Fish, First edition, October 2017.

Rodents can:

- climb up wires and the outside of vertical pipes less than 76mm in diameter;
- climb up the inside of vertical pipes less than 102mm in diameter;
- jump 660 to 915 mm both vertically and horizontally from a flat surface;
- drop 15 to 25 metres without being killed; and
- gain entrance through holes 12.7mm in diameter (for rats) or 6.4mm (for mice).

Areas where birds can perch or roost should also be avoided or minimised.

Exporters should note there are restrictions on the use of wood in EU listed premises and US listed BMS premises. There are specific market access requirements and exporters should consult the relevant OMARs for further information. In other premises the operator should, wherever possible, exclude unprotected wood from all processing areas.

(4) Buildings and facilities must be designed to provide separation, by partition, location, or other effective means (e.g. separation by barrier or red-line), between operations (including waste disposal) that may cause contamination of seafood products.

3.4.3 Design and Layout

(1) The design and layout of the processing facilities and equipment in the premises must:

a) facilitate the control of movement of personnel, raw materials and products, and equipment;
b) facilitate effective cleaning and sanitation between handling seafood products for human consumption and seafood products for animal consumption, and between handling of raw and RTE products; and
c) minimise cross contamination between seafood products for human consumption and seafood products for animal consumption, and between raw and RTE products.

Guidance

The processing areas of premises, including fishing vessels, should be separated by a physical partition from living quarters, retail shops and auction places.

In vessels, separation should be by:
- doors or hatches made of permanent material; or
- adequate space so that contamination is minimised.

Other forms of physical separation include:
- walls (e.g. floor to ceiling high or low wall);
- distance;
- curtains; and
- ante-rooms;

Separate storage facilities are recommended for raw materials and ingredients, partially processed product and final product.

The *Listeria* guide, Part 2: Good Operating Practices provides further guidance about layout and design, particularly for operators processing ready-to-eat (RTE) seafood products. This information may also be useful for operators of any other products who are interested in implementing an enhanced level of GOP.

3.4.4 Floors

(1) The floor in a processing area must be:

a) impervious to the effects of cleaning chemicals, seafood products and water;
b) sufficiently strong to withstand its normal use (e.g. by foot traffic, forklifts); and
c) easy to clean and sanitise.

Guidance

Materials considered suitable for floors include sealed concrete, floor tiles, concrete or mortar with a monolithic surface coating (e.g. a proprietary epoxy coating) and other synthetic material; and in the case of fishing vessels, painted steel is also an option.

Concrete or mortar floors which incorporate an approved latex or synthetic resin finish tend to have better resistance.

(2) Where water on flooring in a processing area may be a source of contamination, the floor should be adequately graded or another effective method should be used to prevent the pooling of water.

Guidance

A gradient of 1 in 50 sloped towards drainage outlets will minimise pooling. Consideration should also be given to the direction of flow so that staff do not walk through waste water.

(3) Floor and wall angles and joints must be constructed in a manner that allows effective cleaning.

Guidance

To allow effective cleaning, the floor/wall joint should be coved in areas where wet operations or wet cleaning occurs. A 75 mm radius coving will usually achieve this outcome. Several options are available including:

- standard coving using concrete or other floor materials;
- covings recessed behind the wall surface; and
- covings made from aluminium (or other suitable material) attached over existing floor and wall surfaces.

Hollow coving should be avoided to prevent the accumulation of dirt and pest harbourage.

All joints should be effectively sealed to prevent the entry of water, pests and contaminants. Joints should be finished flush with the surface.

3.4.5 Walls

(1) The internal walls of processing areas must be:

a) smooth;
b) impervious to moisture and cleaning chemicals;
c) of a colour that does not disguise dirt and contaminants; and
d) easily cleanable.

(2) Where sheeting is used, all joints must be welded, or effectively sealed to ensure that the surfaces in processing and edible product support areas can be readily maintained, cleaned and where appropriate sanitised. The same applies to any holes created when fixtures have been moved.

(3) Porous surfaces such as cement or plaster must be sealed to render them impervious to moisture.

(4) Exposed pipes and/or ducting for cables must be designed and installed in processing and edible product support areas so they do not become dirt traps (e.g. use of a bracket to hold ducting away from the wall) and can be readily maintained, cleaned and where appropriate, sanitised.

3.4.6 Ceilings

(1) The ceilings of processing areas must be:

a) smooth;
b) impervious to moisture and cleaning chemicals;
c) of a colour that does not disguise dirt and contaminants; and
d) easily cleanable.

(2) Overhead fixtures attached to ceilings (e.g. pipe work, overhead cranes and hoses) in processing and edible product support areas must be designed, constructed and located so that they can be easily maintained, cleaned and where appropriate sanitised, and are not a source of contamination.

(3) The joints between the ceiling and the wall in processing and edible product support areas must be constructed and sealed so that they are easily cleanable.

3.4.7 Doors

(1) So that they do not harbour or accumulate contaminants, door jambs and hatchway frames must be effectively sealed to adjoining walls and floor junctions in processing and edible product support areas.

(2) Doors in areas where processing and/or packing is carried out, and which open directly to the outside should be self-closing or staff should be trained to ensure that the doors are kept closed during processing.

Guidance

Doors in areas that open directly to the outside should be kept closed, except when they are being used to move product, containers, or personnel etc. Door openings should be wide enough to prevent unprotected products from coming into contact with door jams etc. when product is moved.

Section 3.4.7(2) does not apply to emergency exit doors or to hatches on fishing vessels.

3.4.8 Access Ways and Traffic Flows

(1) Stairs in processing areas and walkways, which pass over conveyors or tables, must be constructed to prevent contaminants falling on to products, ingredients, additives, containers or product contact surfaces.

3.4.9 Windows

(1) Windows in processing and packing areas (other than in fishing vessels) that may be kept open during operations must be covered by screens or managed in some other way to prevent entry of pests. [AP Reg 54, PSP Notice C1.12(4)]

(2) Windows in processing and edible product support areas must be constructed so that they are easy to clean and prevent accumulation of dirt.

Guidance

Any opening windows in amenities and product support areas should also be kept closed or covered by screens.

Internal window sills should be sloped e.g. at an angle of 45°.

3.4.10 Drainage

(1) The drainage system must have sufficient capacity to handle the wastewater and any particulate matter entering the system.

(2) The design and construction of the drainage system must prevent:

a) odours, pests, other objectionable material and storm water from entering the premises; and
b) contamination of products, packaging and equipment from aerosols and splashes from drains.

(3) Machinery should be located and drainage provided (where necessary) so that any discharge or overspill from processing goes directly into a drain rather than on to the floor.

Guidance

Drains should be covered by a grating that is slightly lower than floor level. Gratings should have perforations of sufficient size and number to allow rapid drainage, but not allow rats to enter e.g. the gaps should be less than 12.7 mm wide. Screens should prevent large fragments of solid material from entering the drains.

Operators should check with their territorial authority for any specific drainage requirements that apply.

3.4.11 Lighting [AP Reg 45, PSP Notice C1.25]

(1) Lights and light fixtures over products or exposed packaging must be of a safety type or otherwise protected to prevent contamination of products or packaging in the event of breakage.

(2) Lights must be of sufficient intensity to allow the required operations, checks, and inspections to be carried out effectively.

Guidance

The following is guidance about recommended lighting levels:

- In areas where quality control inspection is carried out, illumination of at least 540 lux at the point of inspection is recommended.
- In other areas (e.g. areas used for cleaning appliances or for hand washing), illumination of at least 220 lux is usually adequate.

For further information about lighting levels refer to AS/NZS 1680.1.2006 - Interior and Workplace Lighting.

3.4.12 Ventilation [AP Reg 45, PSP Notice C1.26]

(1) Adequate ventilation must be provided in processing areas to minimise steam and condensation, and to prevent airborne contamination of products.

Guidance

Options for ventilation in processing areas include:

- natural ventilation using suitably screened air intakes or ventilating-type windows; or
- mechanical ventilation that is adequate for the size of the premises, the number of persons working there, and the environmental conditions (e.g. heat gain from equipment, condensation).

The direction of air flow should minimise cross contamination from earlier to later stages of processing (e.g. air should flow from cooked to uncooked processing areas and not the reverse).

For further information about ventilation refer to ISO 16890-1:2016 Air filters for general ventilation and the Ambient Air Quality Guidelines (2002) prepared by the Ministry for the Environment and the Ministry of Health.

(2) Fresh air intakes for processing areas, stores and amenities must be located so that incoming air is not contaminated with odours, dust, smoke and other environmental contaminants.

Guidance

Effective filters should be installed, maintained, monitored and cleaned in accordance with the manufacturer's recommendations.

3.4.13 Process Gases and Compressed Air

(1) Compressed air generated on-site for processing and that comes in direct contact with material or product, must be clean and filtered. The appropriate air purity classes for the intended use should be specified in the RMP. [AP Reg 45, PSP Notice C1.27(2)]

Guidance

Process gases may be used as food additives, to modify atmospheres in packaging, cooling or freezing, or as a propellant to dispense food. Gases include carbon dioxide, nitrogen, oxygen and argon.

Product contact air includes:

- air used for cleaning, cooling, drying, conveying, mixing and stirring; and
- compressed air that comes in contact with inputs, product or product contact surfaces.

It does not include air used for cleaning equipment such as foaming units.

Equipment using pressurised air in direct product contact should be fitted with a filter located as near to the outlet as is feasible. The choice of filter will depend on the product and process, and the size, type and concentration of the particulate matter to be removed. Filters should be readily removable for replacement or cleaning.

3.4.14 Equipment [AP Reg 43]

(1) Equipment that comes into contact with any edible products must be designed, constructed, installed and operated in a manner that:

a) ensures the effective performance of the intended task;
b) ensures effective cleaning and where appropriate, sanitation;
c) facilitates good hygienic practices, and effective process control, including monitoring; and
d) does not cause contamination of the product.

Guidance

Fork hoists, powered by internal combustion engines (i.e. fuelled by petrol or diesel), are generally prohibited in areas where product is processed or where packages of opened ingredients and uncovered packaging are stored as they may cause contamination, in particular fumes and taints related to hydrocarbon fuels. An exception to this is if the RMP has specifically included their use and the operator has evidence to demonstrate that all risk factors have been addressed.

(2) Equipment must be:

a) durable;
b) resistant to chipping, flaking, delamination, abrasion;
c) able to withstand exposure to heat, water and all seafood products under normal operating conditions;
d) corrosion resistant;
e) inert to seafood products, cleaning materials and other substances under normal conditions of use; and
f) able to be cleaned without damage to the material's surface.

(3) The following materials must not be used in any equipment that may come into contact with exposed/unprotected seafood products:

a) toxic metals such as cadmium, lead and their alloys;
b) metals whose contact with liquid or other material may create harmful chemical or electrolytic action;
c) porous materials such as sponge rubber, stone slabs, linoleum, leather and fabrics (excluding strainers/filters); and
d) wood (except on fishing vessels as long as it is easy to clean and does not contaminate the product).

Guidance

Austenitic stainless steel (300 series or better) is preferred for equipment that comes into contact with seafood products. The most common austenitic stainless steel is Type 304, also known as 18/8 or A2. Type 316 contains some molybdenum to improve acid resistance (e.g. pitting and crevice corrosion). Commonly used grades of stainless steel are AISI 304 and AISI 304L, or for improved performance AISI 316 and AISI 316L.

Other suitable materials include:

- plastic and coatings that are abrasion and where appropriate heat-resistant, shatterproof, food grade if in direct or indirect contact with food, and do not contain components that will adhere to products when coming into contact with those materials or coatings; and

- good quality galvanised iron, when used in bulk containers for transporting or holding whole headed or gutted fish, in fish scaler drums, and in thawing tanks and freezer trays used for whole and/or headed and gutted fish.

Aluminium should be used only for equipment that has short contact periods with seafood products. Aluminium sheet has a tendency to warp and is susceptible to the effects of oxidation and certain types of corrosion, especially from alkaline cleaning chemicals. Its soft nature also leaves it susceptible to pitting and scratching.

Glass should not be used for equipment that comes into contact with or is used around exposed seafood.

When purchasing new equipment for use in direct contact with seafood products (depending on the equipment and how it is to be used), it is good practice to obtain a letter of guarantee from your supplier as a way of confirming its suitability for food use. Alternatively you can carry out your own assessment. Some export markets will request evidence of a material's suitability for use when carrying out their audits.

For further information refer to EN 1672-2 Food Processing Machinery, the European standard that establishes a general code of practice for hygienic design or ISO 14159:2002 Safety of machinery -- Hygiene requirements for the design of machinery.

(4) If it is necessary to use glass in a processing area, procedures for breakages should be documented and implemented, and equipment available to deal with breakages.

(5) Equipment, such as weighing scales, thermometers (whether stand alone or forming part of a piece of equipment) must have the accuracy, precision, and conditions of use appropriate to the task. [AP Reg 48]. (Also see Part 5 Calibration of Measuring Devices).

(6) Monitoring equipment must be installed where it:

a) can be easily read;
b) is able to take accurate readings (e.g. warmest temperature within refrigeration equipment, the coldest temperature within a cooker); and
c) is adequately protected from physical and chemical damage.

(7) Product contact surfaces of:

a) conveyor belts must be constructed of smooth material, have undamaged edges, and be a colour that does not disguise contaminants;
b) cutting boards must be smooth, shatterproof, and of a colour that does not disguise contaminants; and
c) welds in equipment must be smooth, complete, and without gaps, and angled so as to facilitate cleaning.

(8) Non-product contact equipment and surfaces that affect animal material or product must be constructed so they are easily cleanable.

Guidance

In premises processing ready-to-eat product, non-product contact surfaces in high care areas and that have the potential to impact on the product should be constructed to meet full sanitary design requirements.

(9) Storage equipment:

a) Containers used within the premises for holding seafood products, cleaning materials, waste or other materials should be identifiable to differentiate between uses (e.g. by labels or colour coding);
b) Storage racks or shelving should be a sufficient height off the floor to allow cleaning underneath.

(10) Suitable equipment must be made available for cleaning and sanitising equipment and facilities, and must be maintained in a hygienic and good working condition. [AP Reg 43]

3.4.15 Product Support Areas

(1) Product support areas must be designed and constructed to:

a) facilitate maintenance and cleaning; and
b) avoid pest access and harbourage.

3.4.16 Amenities for Staff

(1) Sufficient space and facilities for staff to consume food, change clothes, store personal belongings and to attend to personal hygiene must be provided, where necessary to ensure these items or activities are not a source of contamination.

Guidance

In land-based premises, the territorial authority can advise on the numbers of toilets required for staff, and on other amenities such as showers and hand wash basins.

For fishing vessels, the amenities may be located within the accommodation section. See section 3.4.3 Design and Layout for more detail.

(2) Amenities must be designed, constructed and maintained to facilitate cleanliness and tidiness.

(3) Amenities must not open directly onto food areas.

(4) Lockers for storing staff clothing and personal belongings (if provided) must be constructed so that they and the surrounding area can be easily cleaned.

Guidance

Lockers should be off the floor (e.g. 300 mm higher) to allow for easy cleaning underneath. Alternatively lockers can be directly on the floor without any gaps. The tops of lockers should be flush with ceiling or tapered to reduce the build-up of dirt.

Storage facilities should be adequate to allow for the separation of personal clothing and other items from clean protective clothing.

3.4.17 Hand Washing and Sanitising Facilities

(1) Hand washing units should not be operated by hand. The design should allow for non-hand operation (e.g. operated by knee or foot) or automatic sensor.

Guidance

If seeking EU or China listing (for example), hand operated units would not be acceptable.

(2) Hand washing facilities must be located in every toilet and/or amenities area, and in places that are accessible to all persons working in rooms where products are processed.

Guidance

This requirement does not apply to rooms used exclusively for smoking, cooking, drying, chilling, freezing or thawing products.

(3) To ensure that suitability for processing or fitness for intended purpose can be achieved and maintained, hand washing facilities must be provided with water that is fit for purpose, soap and single use towels, or other hand drying facilities that do not contaminate washed hands or the surrounding area.

Guidance

Water that is fit for purpose, at about 37.8°C should be provided for hand washing. Note that there are specific hand washing temperature requirements for US listed shellfish premises in the Model Ordinance: XI Shucking and Packing, Requirements for Dealers, .02 Sanitation, Section D. Maintenance of Hand Washing, Hand Sanitising & Toilet Facilities (external website).

Proper hand drying is important as significantly more microorganisms can be spread from damp hands. An example of a dryer that reduces the opportunity to recontaminate washed hands is a roller towel fitted with a timed automatic retraction device. If considering installing air hand dryers, the relatively long time needed to dry hands (30-40 seconds) and the generation of aerosols that may contaminate surrounding areas are of concern. If these problems can be overcome air hand dryers may be viewed more favourably. However, they are generally not suitable in processing areas (especially high-care areas where RTE products are processed). If used in ante-rooms, they should be located at least 2.5m from any equipment or gear. Market access requirements should also be considered and may limit the ability to use air hand dryers.

(4) If hand sanitising units are used, they must be provided with MPI approved hand sanitiser (see the Register of Approved Non-Dairy Maintenance Compounds and the Guidance Document: Approved Maintenance Compounds (Non-Dairy) Manual). [PSP Notice C1.9]

(5) Facilities for washing and, where necessary, sanitising waterproof protective clothing (e.g. boots, aprons, gloves), must be provided and located in or adjacent to the processing area.

3.4.18 Refrigeration Facilities [PSP Notice C1.4, Part C4]

(1) Refrigeration facilities must be designed and constructed to:

a) be capable of reducing materials or products to required preservation temperatures (refer to Part 23: Refrigeration and storage of seafood products) within the required time, and/or holding and storing the seafood products constantly at or below those temperatures;
b) minimise the possibility of contamination of products; and
c) minimise fluctuations in temperature caused by movement of products, people and equipment.

Guidance

Temperature fluctuations can be minimised by using self-closing doors, air curtains, plastic strip curtains and, in the case of doors that open to the outside, truck dock seals or full environmental facilities. Build-up of snow and ice in a freezer indicates that significant entry of warm air has been occurring over a period of time.

(2) All chillers and cold stores must be fitted with temperature indicating devices, and where possible these should continuously record the temperature. [PSP Notice C4.2]

Guidance

Temperature sensors (probes) should be located so that they accurately monitor the temperature within the room. If only one temperature sensor is used it should be located in the return air flow to the evaporator unit as this usually has the highest temperature.

Continuous monitoring of refrigeration temperatures and other relevant parameters is recommended. If this is not possible, temperatures should be monitored periodically and at a frequency based on performance.

If exporting, operators should check the OMARs to see whether continuous automatic temperature recorders (CATRs) are needed to monitor temperatures in refrigeration facilities.

3.4.19 Repairs and Maintenance

(1) A repairs and maintenance procedure must be documented and implemented for the premises, facilities and equipment, to ensure they are maintained in good working condition and are not a source of contamination. [AP Reg 51, PSP Notice C1.7]

Guidance

An effective repairs and maintenance procedure should be designed to proactively identify and record areas requiring work and to ensure that issues are resolved in an appropriate timeframe. The action taken and the target date for completion should be based on the seriousness of the problem and the extent to which it may affect the product's fitness for purpose. Serious non-compliances should be corrected immediately.

The repairs and maintenance procedures should include:

- roles and responsibilities;
- procedures for how routine or programmed maintenance will be managed (i.e. preventative maintenance), including a monitoring schedule for the premises, facilities and equipment;
- procedures for managing non-routine facilities and equipment breakdown;
- procedures for how corrective actions will be taken when defects are identified;
- how target dates or times for completion of repairs or maintenance will be set;
- records to be kept; and
- signature or other unique identifier (in the case of electronic records) of the responsible person(s) once work is completed.

Activities that should be addressed by the procedures include:

- briefing, movement and access of maintenance staff and contractors;
- removing or covering items;
- hygiene of maintenance equipment, tools and materials;
- cleaning and sanitation after construction or maintenance has been carried out;
- frequencies for routine maintenance checks e.g. daily, weekly, periodically; and
- determining the impact that the maintenance or repair will have on the fitness for intended purpose of the product.

Further information about how to manage repairs and maintenance work to ensure that product is not effected, is in Part 2 of the *Listeria* guides Part 2: Good Operating Practices

For small operations with simple processes, a checklist for repairs and maintenance, rather than a full procedure, may be sufficient.

In some cases repairs and maintenance will require a significant amendment to the RMP. See Appendix G of the RMP Manual for information about the types of maintenance activities that may require a significant amendment.

(2) All alterations, repairs and maintenance on buildings, facilities and equipment must be carried out in a manner that minimises exposure of products to any contamination resulting from this work. [PSP Notice C1.7]

(3) Procedures must include how contamination risk is assessed and managed prior to any alteration, repair or maintenance work on buildings, facilities or equipment including: [PSP Notice C1.7(1)(c)]

a) its potential for contaminating inputs, products, packaging, equipment and the processing environment; and
b) where necessary, implementing controls to minimise exposure to contamination.

(4) After repairs or maintenance has been carried out, the affected facilities, equipment and surrounding areas must be cleaned and where appropriate sanitised, and a check of its effectiveness completed by a suitably skilled person before it is put back into service. [PSP Notice C1.7(2)]

(5) Maintenance personnel must comply with the requirements for personnel hygiene that are appropriate to the area they are operating in, including access restrictions, hygienic practices and protective clothing. [AP Reg 55]

(6) Chemicals used in the maintenance of processing areas, equipment and facilities must be used accordance with MPI's Approved Maintenance Compounds Manual. [PSP Notice C1.9]

Guidance

Not all chemicals used for repairs and maintenance need to be approved maintenance compounds. The Approved Maintenance Compound Manual outlines the requirements for the use of chemicals when carrying out maintenance work and identifies the situations when approval is not required.

3.5 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

Guidance

The frequency and type of monitoring will depend on the nature of the operation, and the degree of risk if hazards are uncontrolled. Monitoring options to identify repairs and maintenance problems include:

- specific checks on equipment at defined intervals;
- daily checks on processing areas;
- weekly checks on product support areas (e.g. chemical stores, packaging stores, dry stores); and
- monthly check on the entire premises and surrounding areas.

Monitoring should identify and record all issues that need to be addressed, and specific checks should be carried out to ensure that the issues have been dealt with and recorded.

3.6 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) Records must include monitoring carried out, problems identified and corrective action taken.

Guidance

Examples of other records that may be used to demonstrate compliance are:

- Site plans;
- Equipment registers;
- Alteration / maintenance plans; and
- Training records for suitably skilled persons.

Refer to Part 19 for record keeping requirements.

Part 4: Construction and Operational Requirements for the Swimming of Live Fish

4.1 Purpose and Scope

To ensure that premises and equipment used for the swimming and/or holding of live fish (including crustaceans and abalone) are suitable and to minimise contamination of the live animals. Areas used for swimming live fish may operate under an RMP or in a listed animal material depot (AMD), or under the Food Act if they are exempt from the requirement to operate under an RMP (see section 2.1.2).

Guidance

If operating an AMD, the mandatory requirements in Part 7, Subpart 1 of the AP Regs and PSP Notice H1.6 apply.

If live fish are processed and packed in the same area that is used for swimming and holding live fish, the processing and packing areas need to meet the full hygienic standards that apply to an RMP seafood processing premises. Packing is a process step in the RMP.

This Part does not cover marine farming operations or the storage and/or depuration of BMS. It also does not cover areas of the premises where fish processing occurs.

4.2 Sources of Hazards

Source	Examples of hazards
Swimming water	Chemical residues
Water	Chemical residues
Holding tank	Chemical residues

4.3 Mandatory Requirements

AP Reg 42 How premises, etc, must be designed, located, and constructed

(1) The operator of a risk management programme must ensure that premises, places, facilities, equipment, and essential services are located, designed, and constructed so that—

a) animal material is suitable for processing; and
b) animal products are fit for their intended purpose.

(2) For the purposes of subclause (1), the operator must have regard to the following:

a) the animal material or animal product to be processed or produced:
b) the nature of the processes or activities involved:
c) holding or storage requirements, or both:
d) the capacity required for processing or activities to be carried out:
e) the surrounds and external areas:
f) the proximity to other operations.

AP Reg 43 How premises, etc, must be operated

(1) The operator of a risk management programme must ensure that premises, places, facilities, equipment, and essential services are operated in a manner that minimises and manages the exposure of animal material, animal product, or other input to risk factors.

(2) For the purposes of subclause (1), the operator must have regard to the following:

a) the animal material or animal product to be processed or produced; and
b) the operational capability and capacity of the premises or places, facilities, equipment, and essential services.

AP Reg 45 Operation of essential services

The operator of a risk management programme must ensure that—

a) all essential services are managed to minimise contamination of animal material and animal product; and
b) lighting is of sufficient intensity to enable satisfactory performance of all activities in the processing environment; and
c) ventilation is sufficient to manage air temperature or pressure and condensation or humidity.

PSP Notice C1.2 – Design of premises and equipment [relevant clauses]

(1) Premises and equipment must be designed and constructed in such a way as to minimise or adequately manage any potential adverse impacts on animal material or animal product from things such as pest infestation, flooding, strong or objectionable odours, smoke, dust, fumes, or other contaminants.

(2) The design and construction of premises and equipment must ensure the premises and equipment:

a) are accessible for maintenance, cleaning, operation, monitoring, inspection and verification; and
b) minimise the contact of contaminants with any animal material or animal product, or with any other input or thing used in processing animal material or animal product; and
c) prevent access by, and the harbouring of, pests; and
d) prevent the accumulation of contaminants; and
e) enable wastes to be removed, including through adequate drainage, without affecting processing activities.

(3) Premises must be provided with the facilities and equipment necessary to ensure that the hygiene of premises,equipment, and personnel is maintained and the suitability of animal material and the fitness for intended purpose of animal product are not adversely affected.

(4) Storage facilities for animal material, animal product, and other inputs must enable the animal material, animal product, and other inputs, to be:

a) effectively protected from contamination during storage; and
b) stored in an environment that minimises deterioration (such as by appropriate temperature and humidity control).

(7) The working space provided must be sufficient to:

a) allow for appropriate processing activity and the monitoring and verification of that activity; and
b) minimise the risk of contamination and deterioration of animal material and animal product before and during processing.

PSP Notice C1.3 – Materials [relevant clauses]

(1) This clause applies to materials that may affect the suitability of animal material or the fitness for intended purpose of animal product and are used for:

a) the exposed internal surfaces of premises (such as walls, floors, and ceilings); and
b) the surfaces of equipment.

(2) The materials must (to the extent necessary to ensure that they will not harbour contaminants or be a source of contaminants):

a) be impervious, non-absorbent, and resistant to the effects of corrosive substances with which they are likely to come into contact; and
b) be free from depressions, pits, cracks, and crevices that may harbour contaminants; and
c) have no toxic effect when used; and
d) be able to be cleaned, and where necessary, sanitised; and
e) be durable, resistant to fracture, and capable of withstanding repeated exposure to normal cleaning and sanitising; and
f) minimise the accumulation of condensation; and
g) be of a colour that is not intended to disguise contaminants (having regard to the lighting arrangements and type of processing being carried out).

PSP Notice C1.11 – Waste [relevant clauses]

(3) Waste storage areas at premises must be:

a) identified or identifiable; and
b) clearly separated from any stored animal material, animal products, or other inputs.

(4) Implements and equipment used for collecting, storing, or treating waste must be:

a) identified or identifiable as for use only with waste; and
b) stored when not in use in a designated area.

(5) This clause supplements the requirements of Regulation 47.

C1.25 – Lighting [relevant clauses]

(1) Light fittings must be designed, constructed, and located to avoid them being a source of contamination, including in the event of a breakage.

C1.27 – Process gases

(1) Process gases, (including compressed air) that come into direct or indirect contact with, or could affect, animal material or animal product in processing premises must:

a) be fit for purpose at the point of use; and
b) not compromise the fitness for intended purpose of the animal material or animal product being processed.

(2) If compressed air is generated on site for the purpose of processing and comes into direct or indirect contact with animal material or animal product:

a) the source air must be filtered to remove any contaminants that may affect the suitability for processing of animal material or the fitness for intended purpose of animal product; and
b) the cleanliness of the source must be within the capability of the filtration system.

(3) This clause supplements the requirements of Regulation 45.

4.4 Procedures

[AP Reg 42 & 43, PSP Notice C1.2, C 1.3, C1.11, C1.25, C1.27]

4.4.1 Construction

(1) Live fish swimming areas must be designed, constructed and maintained to:

a) minimise contamination of the live fish; and
b) facilitate cleaning and maintenance.

Guidance

Live fish swimming areas do not have to comply to the same degree with the construction requirements for seafood processing premises – for example smooth impervious walls are not mandatory.

Construction materials in such areas may include exposed wood and roofing iron provided they are not detrimental to the health of the live fish and do not contaminate the swimming water. In some instances materials such as wood or porous concrete may form part of the biofilter system used for maintaining water quality.

(2) The area for the swimming and holding of live fish should be separated from any place used for living quarters by:

a) doors made of permanent material; or
b) other forms of physical separation that minimise contamination of live fish.

(3) Toilet areas must not open directly on to any live swimming area.

(4) Service lines such as cables and pipes must be located and installed so that they can be easily cleaned and maintained and do not contaminate the live swimming area.

4.4.2 Water Supply

(1) The water used for swimming live fish must be sufficient to maintain the fish in their live state [Animal Welfare Act 1999][2].

Guidance

Water containing treatment chemicals (e.g. chlorine) is not suitable for swimming live fish as the chemicals will have an adverse effect on their health and welfare. Compounds (e.g. bacterial cultures, pH modifiers and salt) may be used to modify the water conditions to ensure survival of the fish. Live crustaceans are sensitive to water quality and are good indicators of water quality.

The water use for swimming must be fit for purpose but does not need to meet the requirements in the Section C, Subpart 4 of the PSP Notice.

4.4.3 Lighting

(1) Refer to Part 3 for further information.

4.4.4 Cleaning and Sanitising Facilities

(1) Facilities for hand washing and for the cleaning of waterproof clothing must be available in or near the live swimming area. Refer to Part 8 for further information.

(2) Cleaning materials and equipment must be stored in a way that prevents contamination of live seafood products, ice, water and containers.

4.4.5 Equipment

(1) Equipment used in contact with live fish must be made of material that will not contaminate the live fish or the water.

[2] Under Section 10 of the Animal Welfare Act 1999, the owner or persons in charge of an animal are obligated to provide for the physical, health and behavioural needs of the animals. Physical, health and behavioural needs include "proper and sufficient water" (see Section 4 of the Animal Welfare Act 1999).

4.4.6 Compressed Air

(1) Refer to Part 3 for further information-.

4.4.7 Containers

(1) Refer to Part 15 for the requirements for containers used in a live fish swimming and holding areas.

(2) Containers must be stored in a way that minimises contamination of the live fish and the live swimming area.

4.4.8 Chemicals and Maintenance Compounds

Guidance

In general maintenance compounds (including those used for cleaning and sanitising) should not be used in live swimming or holding areas because they may contaminate the swimming/holding water. Chemical exposure may have detrimental effects on the fish and even cause death.

4.4.9 **Cleaning** [AP Reg 50]

(1) A cleaning procedure must be documented and implemented for all live swimming and holding areas to ensure that these areas are kept in a clean and tidy condition.

4.4.10 **Disposition of Unsuitable Material** [Also See Part 26]

(1) Material that is not suitable for processing for human consumption (e.g. diseased or dead fish) should be transferred to a temporary holding area and physically separated from healthy live fish, until it is sent for further processing into products for animal consumption, or for disposal.

(2) All live fish found to be unfit for human consumption must be handled and disposed of in a manner to minimise contamination of other product and product contact surfaces, and to prevent such fish entering the human food chain.

4.5 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

Guidance

The frequency and type of monitoring will depend on the nature of the operation and the degree of risk if hazards are uncontrolled. Monitoring options include:

- daily checks on swimming/holding areas;
- weekly or monthly checks to confirm that the cleaning requirements have been met; and
- monthly checks on repairs and maintenance.

4.6 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) These records must include monitoring carried out, problems identified and corrective actions taken.

Guidance

Examples of other records that could be used to demonstrate compliance are training records for suitably skilled persons.

Refer to Part 19: for record keeping requirements.

Part 5: Calibration of Measuring Devices

5.1 Purpose and Scope

To ensure that measurements taken to demonstrate conformity with mandatory and other requirements are accurate and valid.

5.2 Mandatory Requirements

AP Reg 48 Calibrating measuring equipment and monitoring equipment

(1) The operator of a risk management programme must ensure that measuring equipment or monitoring equipment used for critical measurements—

a) is appropriate for the activity to be carried out; and
b) is accurate; and
c) where appropriate, is uniquely identifiable; and
d) where necessary, is managed to prevent unauthorised adjustments; and
e) is calibrated; and
f) functions as intended.

PSP Notice C1.10 – Calibrating measuring equipment

(1) In relation to equipment that can be calibrated, operators must have procedures that set out how the equipment used to measure critical measurements is calibrated:

a) against a reference standard showing the traceability of calibration to a national or international standard of measurement; or
b) if no such reference standard is available, by a suitably skilled person on a basis documented directly or by reference in the RMP.

(2) The procedures must specify the minimum calibration frequencies for each piece of equipment used for critical measurements.

(3) This clause supplements the requirements of Regulation 48 or, for dairy manufacturers not operating under an RMP, the requirements of Regulation 149.

Guidance

Critical measurements are measurements taken to confirm (directly or indirectly) the fitness for intended purpose of the product (e.g. measurements at a Critical Control Point (CCP)). Operators are responsible for determining the critical measurements for their operations. Critical measurements may be identified in a RMP or mandated as critical in the legislation, e.g. the preservation (load-out) temperatures in clause H2.5(2) of the PSP Notice.

The calibration requirements in legislation apply only to equipment used to provide critical measurements. When developing a RMP, operators should determine which of their processes require critical measurements to be taken, and document the result of this determination in their RMP. The calibration procedure should deal with the calibration of equipment used to take those measurements.

5.3 Procedures

[APA section 17, AP Reg 48, PSP Notice C1.10]

(1) A calibration procedure must be documented and implemented.

(2) Measuring equipment (whether stand-alone or forming part of a piece of equipment) must have the accuracy, precision, and conditions of use appropriate to the task performed.

(3) For equipment used for critical measurements, the procedure must also include the relevant elements listed below:

a) the means of permanently identifying the equipment (e.g. serial numbers, indelible tags. These should be recorded on the calibration record sheet);

Guidance

It is important to consider the level of use of the equipment, its stability and the degree of accuracy required. Some pieces of equipment (e.g. scales), which become inaccurate if moved, may require calibration after any such movements.

Any in-house routine check of measuring equipment should be carried out at regular and established frequencies by suitably skilled personnel.

b) procedures for calibrating the instrument;

Guidance

This can be achieved by using suitable testing facilities capable of providing certification to show the required traceability, or by using reference materials (e.g. certified test weights or standard solutions).

c) controls to minimise or prevent movement of the equipment if this could affect the calibration; and
d) how any correction factor will be dealt with.

(4) For equipment used for critical measurements, the procedure should also include the elements listed below:

a) a description or list of the equipment used to take critical measurements (e.g. its name, make, model and/or other identification characteristics);
b) the equipment location; and
c) the maximum error allowed before corrective action is taken (e.g. ± 1 g, ± 1°C).

Guidance

Such equipment may include process temperature measuring/recording devices, timing devices, flow meters, thermometers used for measuring cooked product temperatures or temperatures of product at load-out, moisture or water activity meters, pH meters used for checking the pH of marinated product, scales used for measuring critical ingredient weights, and metal detectors.

(5) Reference standards (e.g. reference thermometers or reference weights) must have a current calibration certificate before they can be used.

Guidance

When calibrating automatic temperature recording devices (CATRs) that are used for non-critical measurements verification against a calibrated thermometer would be acceptable.

Table 1 provides guidance for the calibration of equipment used for critical measurements. This information may also useful for equipment used for non-critical measurements. The frequency applied in practice should be based on the stability and purpose of the equipment.

Table 1: Calibration methods and frequencies for measuring equipment

Measuring equipment	Method	Minimum recommended frequency
Standardised thermometer (reference thermometer)	Standardised against a national or international standard	Annually
Working thermometers	Calibrated against a reference thermometer	Annually
	Ice point and/or boiling point method, as appropriate (Refer to methods following this table)	Those used daily for monitoring of CCPs and critical limits – weekly or monthly. Other working thermometers – 3 monthly
Continuous automatic temperature reading devices (CATR)	Calibrated against a reference thermometer	Annually
Temperature probe and/or recorder (e.g. data logger, cooker probe)	Calibrated against a reference thermometer	Annually
	Calibrated against a reference thermometer (in-house check)	Probe – weekly or monthly, e.g. if used to measure cooked product temperatures (i.e. at a CCP)
Water activity meter	Calibrated against standard solutions; manufacturer's instructions	Before each day's use, or as recommended by manufacturer
	Servicing and calibration	Annually or as recommended
pH meter	Calibrated against standard solutions; manufacturer's instructions	Before each day's use, or as recommended by manufacturer
	Servicing and calibration	Annually
Metal detector	Test against metal test pieces	At least daily
	Servicing and calibration	Annually
Weighing scales (ingredient and product scales)	Check against test weights	Daily
Weighing scales	Certify for accuracy as per the Weights and Measurement Act 1987	Annually
Test weights	Standardised against a national standard	Annually
Light meter	Servicing and calibration	Annually

Calibration methods

Calibration can be carried by persons or agencies with appropriate expertise, such as accredited agencies/laboratories, instrument specialists or suitably skilled persons.

Boiling point calibration is used when monitoring temperatures higher than room temperature, for example cooking temperatures. When probes are used to monitor freezer or cold store temperatures it is

recommended that calibration is also carried out at those temperatures. At least two temperatures (e.g. a combination of the ice point and boiling point) is recommended for more accurate calibration when monitoring a wide range of temperatures.

Ice point method:

- Use enough crushed ice in a container to allow immersion of most of the probe stem. Add just enough water to remove the air around the ice particles and to form a slush. Wait for the ice to appear clear;
- Stir the mixture (do not use the probe for mixing), tip off excess water, insert the probe and leave it for about 2 minutes. Ensure that the tip of the probe is in good contact with the slush ice at the centre of the container;
- Stir the mixture again and check the reading on the thermometer. Accept if the deviation from 0°C is within the declared limits of accuracy; and
- If the deviation from 0°C is greater than the limit of accuracy, or greater than ± 1.0°C, adjust the thermometer or replace it.

Boiling point method:

- Place the probe in a container with boiling water for about 2-3 minutes until the thermometer reading stabilises. The probe should be at the centre of the container;
- Accept if the deviation from 100°C (or appropriate temperature according to elevation) is within the declared limits of accuracy; and
- If the deviation from 100°C is greater than the limit of accuracy, or greater than ± 1.0°C, adjust the thermometer or replace it.

Freezer method:

- Place the reference thermometer and probe to be checked side by side in the freezer or cold store;
- Once the temperatures have stabilised record the temperatures, wait another minute and repeat (up to 3 times);
- Accept if the deviation is within the declared limits of accuracy; and
- If the deviation is greater than the limit of accuracy, or greater than ± 1.0°C, adjust the thermometer or replace it.

5.4 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out checks for compliance with documented procedures and to demonstrate that equipment used remains calibrated within an acceptable range.

Guidance

Monitoring should also include regular checks to ensure calibration is up-to-date. The level of monitoring will depend on how frequently the device is calibrated; for example if annual calibration is required operators should schedule six-monthly checks.

5.5 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) The records must include:

a) calibration records;
b) certificates showing traceability to appropriate standard measurement;

c) identification, location and calibration status of equipment;
d) calibration schedules;
e) training records for persons involved in key tasks; and
f) monitoring and verification records.

Refer to Part 19 for record keeping requirements.

Part 6: Water

6.1 Purpose and Scope

To ensure that an adequate supply of water that is fit for its intended purpose (including seawater) is available for hygienic operations to minimise contamination and maintain the fitness for intended purpose of seafood products. Water includes ice and steam.

6.2 Sources of Hazards

Water

Source	Examples of hazards
Faecal material (e.g. animal droppings, sewage), dead animals, offal pits, vegetation	Pathogenic microorganisms – *E.coli* spp., *Campylobacter* spp., C*ryptosporidium, Giardia*, viruses
Agricultural chemicals (e.g. fertiliser, pesticides), industrial waste	Nitrate, cadmium
Soil	Pathogenic microorganisms – *E.coli* spp., *Campylobacter* spp., C*ryptosporidium, Giardia*, viruses Toxic chemicals, e.g. arsenic, boron
Pipes and tanks	Copper
Roof materials and paint for roof collected water	Lead, asbestos

Seawater

Source	Examples of hazards
Faecal material (e.g. animal droppings, sewage)	Pathogenic microorganisms – *E.coli* spp., *Campylobacter* spp., C*ryptosporidium, Giardia*, viruses
Agricultural chemicals (e.g. fertiliser, pesticides)	Nitrate
Pollution from vessels in area	Fuel, diesel, hydraulic fluid

6.3 Mandatory Requirements

AP Reg 42 How premises, etc, must be designed, located, and constructed

(1) The operator of a risk management programme must ensure that premises, places, facilities, equipment, and essential services are located, designed, and constructed so that—

a) animal material is suitable for processing; and
b) animal products are fit for their intended purpose.

(2) For the purposes of subclause (1), the operator must have regard to the following:

a) the animal material or animal product to be processed or produced:
b) the nature of the processes or activities involved:
c) holding or storage requirements, or both:
d) the capacity required for processing or activities to be carried out:
e) the surrounds and external areas:
f) the proximity to other operations.

AP Reg 43 How premises, etc, must be operated

(1) The operator of a risk management programme must ensure that premises, places, facilities, equipment, and essential services are operated in a manner that minimises and manages the exposure of animal material, animal product, or other input to risk factors.

(2) For the purposes of subclause (1), the operator must have regard to the following:

a) the animal material or animal product to be processed or produced; and
b) the operational capability and capacity of the premises or places, facilities, equipment, and essential services.

AP Reg 45 Operation of essential services [relevant clauses]

The operator of a risk management programme must ensure that—

a) all essential services are managed to minimise contamination of animal material and animal product; and

AP Reg 46 Water

The operator of a risk management programme must ensure that water is fit for its intended purpose at its point of use, and of sufficient quantity for the operations of the animal product business.

PSP Notice Subpart 4: Water [relevant clauses]

PSP Notice C1.13 – Application of this Subpart [relevant clauses]

(1) This Subpart applies to water used by processors of animal material or animal products, other than:

a) water used for any purposes that cannot affect the fitness for intended purpose of animal material or animal product; or
b) water used:

i) in connection with live fish (such as for swimming or holding) (see Part H2 (Fish processing)); or
ii) for washing BMS before depuration (see Part H3 (BMS processing for human consumption)); or
iii) during the depuration or wet storage of BMS (see Part H3 (BMS processing for human consumption)).

PSP Notice C1.14 – Standard requirements for all water [relevant clauses]

(1) In order to be fit for its intended purpose at its point of use, as required by Regulation 46, the standard requirements for water used by processors are that the water:

a) must not have E. coli detectable in any 100 ml sample; and
b) must not exceed turbidity of 5 NTU (Nephelometric turbidity units); and
c) in the case of seawater, must also be free of excessive turbidity and colour, offensive odours, and contaminants.

(2) Processors who use town supply water without treating it, or who use seawater on a vessel can assume that the water meets the standard requirements in subclause (1), unless the processor has reason to believe that the water may not meet those requirements.

PSP Notice C1.15 – Water-use plans

(1) Every processor who uses water to which this subpart applies, other than seawater used on a vessel, must have a procedure for managing water, referred to as a water-use plan, which must be included in their RMP.

(2) Every water-use plan must:

a) identify all water sources, as required by clause C1.16; and
b) specify the purposes for which the water from each source is used; and
c) give the name or position of any suitably skilled person required by this subpart; and
d) state the standard requirements for all water (as in clause C1.14(1)); and
e) set out any water-use criteria developed for the water, along with the monitoring frequencies (see clause C1.17); and
f) include the procedures for managing and maintaining the on-site water reticulation system (see clause C1.24); and
g) set out a schedule of periodic reassessment review of the water's fitness for purpose (see clause C1.22); and
h) specify the corrective actions that would be required under clause C1.23.

(3) Water-use plans must also include the following, as relevant:

a) if the processor treats the water, the details of the treatment system and the procedures required by clause C1.18:
b) if testing of the water is required, sample-taking and testing requirements (see clause C1.21):
c) if routine water monitoring is required under clause C1.20, a schedule of the routine monitoring for compliance with the standard water requirements and water-use criteria, as relevant:
d) if testing is required to be done by an accredited laboratory (see clause C1.21(3), the name of the laboratory.

(4) Processors must keep copies of all records and information used to develop a water-use plan.

PSP Notice C1.16 – Water sources

(1) A processor's water-use plan must identify all sources of water used by the processor as one of the following:

a) town supply water:
b) own-source water:
c) seawater:
d) reused or recovered water.

(2) Processors using seawater on vessels must ensure that:

a) the source water is taken from places that are sufficiently far offshore to ensure that the water is not at risk from pollution sources; and
b) the seawater intake is be situated so as to minimise contamination of the seawater by wastewater discharges, waste, and engine coolant.

PSP Notice C1.17 – Water-use criteria

(1) Processors must develop water-use criteria for all water used, along with monitoring frequencies.

(2) However, water-use criteria need not be developed if the water is any of the following:

a) town-supply water, used without treatment, where meeting the standard water requirements means the water is fit for its intended purpose:
b) seawater used on a vessel:
c) own-source water that has been shown by testing to meet the standard water requirements, and where a risk assessment has confirmed that no additional water-use criteria are necessary to ensure the water is fit for its intended purpose.

(3) A processor's water-use criteria must:

a) reflect the source of the water and the purpose for which it is used; and
b) be developed by a suitably skilled person; and

c) be based on an assessment of any chemical, biological, physical, or radiological hazards or other risk factors (and may be done, for instance, by using any relevant water supply assessment checklist available on the MPI website).

(4) When determining the frequencies for monitoring compliance with water-use criteria operators must take into consideration:

a) the relevant water-use criteria; and
b) the variability of the source water; and
c) the reliability of any water treatment system; and
d) the severity of risk to the fitness for purpose of the product (which depends on the nature of the identified hazard).

PSP Notice C1.18 – Water treatment

(1) If water requires treatment before it is fit for its intended purpose at its point of use:

a) the treatment system must be developed and operated by a suitably skilled person; and
b) all equipment used for treating water must be installed, maintained, and operated in accordance with the manufacturer's instructions.

(2) If a processor treats water, the water-use plan must include procedures that:

a) describe the treatment system by reference to (at least) the type of treatment, operating parameters, procedures for control, and equipment used; and
b) set out the testing or other checks required to ensure the treatment system is operating as required.

(3) If water is treated by chlorination, the water-use criteria must require not less than 0.2 mg per litre (parts per million) of free available chlorine, and not greater than 5 mg per litre (parts per million) of free available chlorine, after either:

a) a minimum contact time of 30 minutes; or
b) an appropriate alternative determined by the suitably skilled person.

PSP Notice C1.19 – Testing before first use

(1) All processors, other than those listed in clause C1.17(2), must test the water, before it is first used for processing, at the point of use in order to confirm that it meets the standard requirements for water (if necessary) and the applicable water-use criteria.

PSP Notice C1.20 – Routine monitoring

(1) All processors, other than those listed in clause C1.17(2), must conduct routine monitoring of the water for compliance with:

a) the standard water requirements; and
b) their water-use criteria.

(2) Any processors using treated town supply water must conduct routine monitoring at the frequencies set out in their water-use plan, as determined under clause C1.17.

(3) Processors using seawater on land-based premises must conduct routine monitoring at the following frequencies:

a) for compliance with the standard water requirements, the minimum frequencies in Table 1; and
b) for compliance with their water-use criteria, the frequencies determined under clause C1.17.

(4) All other processors required to conduct their routine monitoring at the following frequencies:

a) for compliance with the standard water requirements (and, if necessary, pH and chlorine), the minimum frequencies in Table 2; and
b) for compliance with their water-use criteria, the frequencies determined under clause C1.17.

Table 1: Monitoring frequencies for seawater on land-based premises

Average daily water use while processing	Minimum sampling frequency
<2 000 m^3/day	1 test per month
2 000-10 000 m^3/day	1 test per 2 weeks
>10 000 m^3/day	1 test per week

Table 2: Monitoring frequencies for other water on land-based premises

Processing operation using treated water	Average daily use while processing	Microbiology (*E. coli* or total coliforms)	Turbidity (unless a validated alternative frequency is in the RMP)	pH (only necessary if water chlorinated)	Chlorine (only necessary if water is chlorinated)
All processors	<100 m^3/day and product packaged at all times	1 per 6 months	1 per 6 months	1 per 6 months	Daily when staff present and premises operating
	100 - 1 000 m^3/day and product packaged at all times	1 per 3 months	1 per 3 months	1 per 3 months	Daily when staff present and premises operating
	<2 000 m^3/day	1 per month	1 per month	1 per month	Daily when staff present and premises operating
	2 000-10 000 m^3/day	1 per 2 weeks	1 per 2 weeks	1 per 2 weeks	Daily when staff present and premises operating
	>10 000 m^3/day	1 per week	1 per week	1 per week	Daily when staff present and premises operating

PSP Notice C1.21 – Sample-taking and testing

(1) Samples must be obtained and handled in a manner that ensures they are:

a) representative of the water being tested; and
b) appropriate to the type of test.

(2) Tests performed to monitor parameters relating to water treatment (such as chlorine, pH, and turbidity) may be performed by any suitably skilled person as long as the person uses methodologies that are documented or referenced in the water-use plan and, where appropriate, calibrated equipment.

(3) Water analysis used to confirm that water meets the standard water requirement in clause C1.14(1)(a) and any other relevant water-use criteria (see clause C1.17) must be performed by an accredited laboratory that has the required tests in its scope of accreditation.

PSP Notice C1.22 – Periodic reassessment

(1) All water, other than seawater used on a vessel, must be reassessed:

a) within 1 month after any change that may adversely affect the water's fitness for intended purpose to:

i) the water source; or
ii) the environment in or around the water source; or
iii) the reticulation system; or
iv) the intended purpose of the water; or
v) any aspect of the treatment system (if relevant); and

b) at least once every 3 years following an assessment or, if no assessment has been done, within at least 15 months after commencement of this Notice.

(2) Subclause (1)(a)(i) and (ii) do not apply to processors using town supply water.

PSP Notice C1.23 – Corrective actions

(1) A processor must check water used for processing if the processor has any reason to believe that any water that comes into direct or indirect contact with animal material or animal product is not fit for its intended purpose (for instance, as a result of advice that the water is not of the standard required for that water, or water monitoring that shows that it does not meet one or more of the standard requirements for water or relevant water-use criteria, or the water reticulation system becomes contaminated).

(2) If water is confirmed to be not fit for its intended purpose the processor must;

a) take corrective action; and
b) ensure that any animal material or animal product adversely affected by the water is managed in accordance with Part C6 (Non-conforming animal material or animal product) as if it may be nonconforming animal material or animal product.

PSP Notice C1.24 – On-site water reticulation

(1) On-site water reticulation systems on land-based premises (including water pipes and tanks) must:

a) be designed, installed, maintained and operated in a manner that ensures that water is delivered for the purpose for which it is intended; and
b) minimise dead ends (where water does not circulate but remains static) and backflow; and
c) prevent the contamination of water and unintentional mixing between water intended for different purposes.

(2) Water lines in processing areas that contain water of different standards (such as water that is unsuitable for direct or indirect contact with animal material or animal product) must be labelled or otherwise identified.

6.4 Procedures

[APA Section 17, AP Reg 10 & 17, PSP Notice Part C1 subpart 4]

6.4.1 **Water Supply** [AP Reg 42 & 43]

(1) An adequate supply, volume, temperature (if applicable) and pressure of water that is fit for purpose (including seawater, where appropriate) must be available and used for:

a) processing material and product;
b) cleaning and sanitation;
c) personnel hygiene; and
d) any other activity where water comes into direct or indirect contact with edible product.

(2) Water that is not fit for the purposes listed under 6.4.1(1) may be used in seafood premises (e.g. for flushing toilets and urinals, washing down areas outside the premises like roadways and external

drains, washing down truck exteriors, wash down of inedible areas), as long as the RMP identifies any associated hazards, together with their controls.

Guidance

Water may be sourced from a town-supply (e.g. local authority or council), or it may be your own-source (which includes seawater). You may use water of any standard provided it meets the standard requirements for water and any water-use criteria, and is fit for the purpose for which it is being used.

To ensure your water is fit for its intended purpose you should be aware of its quality. If the water is town-supply, in most cases you can assume it can be used without treatment. The exception to this is if you are aware the town-supply is not fit for the purpose for which you will be using it, or if you need water of a higher standard because of how it is to be used.

The basic steps to ensure your water is fit is to:

- identify your water source(s);
- identify what you will be using the water for (e.g. cleaning and sanitation, amenities, cooking or cooling product, as an ingredient, in relation to RTE product or product for vulnerable consumers);
- use a suitably skilled person to identify the contaminants that are in or are likely to be in the water;
- permantly remove the source of water contamination if you can, or treat the water to remove the contaminants;
- set any water use criteria;
- monitor the water treatment system;
- monitor the water at the point of use to ensure that the contaminants are not in the water at levels that would make the water unfit;
- maintain the reticulation system so it does not contaminate the water.

The requirements of the PSP Notice and references to further procedures in this section are identified in Table 2.

Table 2: Water types and applicable requirements

Section reference	Water source				
	Town-supply with no additional treatment by the operator Land-based premises and RMP fishing vessels	Town-supply with additional treatment[3] by the operator Land-based premises and RMP fishing vessels	Operator's own-source with or without treatment Includes wells, bores, rivers, lakes, reservoirs, or rainwater	Seawater: land-based premises	Seawater: RMP fishing vessels
Water use plan C1.15	✓	✓	✓	✓	X Recommended
Water sources identified C1.16	✓	✓	✓	✓	✓ C1.16(2)

[3] Examples of additional treatments are the use of chlorine or chlorine dioxide, ozone, filtration, boiling, ultraviolet radiation and reverse osmosis.

Standard requirements for water C1.14	✓	✓	✓	✓	✓
Water use criteria C1.17	X	✓	✓ Needed if water needs treatment to be FFP	✓ Needed if water needs treatment to be FFP	X
Water treatment procedures C1.18	X	✓	✓ Needed if water is treated	✓ Needed if water is treated	✓
Testing before first use. Std reqs for water and any water use criteria C1.19	X Recommended	✓	✓	✓	X
Routine monitoring C1.17 & C1.20	X	✓ - PSP Notice Table 2 for std reqs - Own frequency for water-use criteria	✓ - PSP Notice Table 2 PSP for std reqs - Own frequency for water-use criteria	✓ PSP Notice Table 1	X
Trained sampler	✓ only if water sampled	✓	✓	✓	✓ only if water sampled
Accredited lab	✓ only if water tested	✓	✓	✓	✓ only if water tested
Suitably skilled person	✓	✓	✓	✓	X recommended
Periodic reassessment C1.22	✓	✓	✓	✓	X recommended
Corrective actions C1.23	✓	✓	✓	✓	✓
Reticulation C1.24	✓	✓	✓ land X vessel	X	X

6.4.2 Standard requirements for water

(1) Before processing can begin at a seafood premises, water (including seawater in a land-based premises) coming into direct or indirect contact with material or product must be:

a) sourced and where necessary and treated to provide water that is fit for its intended purpose;

b) tested to confirm that it meets the requirements in Table 3: Standard requirements for water at point-of-use, unless it is town-supply and the processor is confident the water meets the standard requirements.

(2) If the standard requirements for water are not met, action (such as treatment) must be taken to ensure that the water is fit for purpose at point of use.

Table 3: Standard requirements for water at point of use

Measurement	Criteria
E.coli	Must not be detectable in any 100 ml sample.
Turbidity	Must not exceed 5 NTUs but should not routinely exceed 1 NTU.

6.4.3 Water-use criteria

6.4.3.1 Town-supply water treated by the operator and seawater in a land-based premises

(1) Town-supply water that is further treated by the operator, and seawater in a land-based premises must:

a) be assessed by a suitably skilled person for its fitness for intended purpose by carrying out an analysis of hazards and other risk factors;
b) have water-use criteria for any contaminant that cannot be eliminated from the source;
c) be tested to confirm that it meets the water-use criteria (if water-use criteria are set).

(2) Seawater must also be free of excessive turbidity and colour, offensive odours, and contaminants.

(3) If the water-use criteria are not met, action (such as treatment) must be taken to ensure that the water is fit for purpose at point of use.

6.4.3.2 Operator's own water supply

(1) Water supplied by an operator for their own use, with or without further treatment, must:

a) be assessed by a suitably skilled person to determine its fitness for intended purpose by either:
   i) completing the Own-source water checklist and template water-use plan (non-dairy) on the MPI website; or
   ii) carrying out an analysis of hazards and other risk factors; and
b) set water-use criteria for any contaminant that cannot be eliminated from the source;
c) if water-use criteria are set, be tested to confirm that it meets the water-use criteria.

(2) If the water-use criteria are not met, action must be taken (e.g. the water must be treated) to ensure that the water is fit at point of use.

Guidance

To determine whether water is fit for its intended purpose (e.g. the water-use criteria are appropriately set and met) it can be assessed against the Maximum Acceptable Values (MAVs) for the relevant determinants in the Drinking Water Standards, and the Aesthetic Values for Drinking Water Notice.

For example, if the suitably skilled person identifies that certain biological, chemical or radiological hazards are contaminants in the water, these can be tested against the relevant MAV in the standard. Noting that stricter criteria may be required for these determinants depending on the intended use of the water.

Guidance

The Own-source water checklist and template water-use plan (non-dairy) is used to determine the sources of hazards in various types of water supplies (e.g. roof water, surface or bore water) and whether hazards are in the water levels that are unacceptable given its intended use. If the water is not fit for its intended purpose treatment and/or other corrective actions must be implemented.

For further guidance on how to set up roof or bore water own-supplies, refer to the Acceptable Solutions developed by Taumata Arowai.

6.4.4 Ice

(1) Ice coming in contact with material or product must be stored and handled to prevent contamination and to retain its status as fit for purpose at point of use.

Guidance

Operators receiving ice from another premises for use in a land-based premises or on a vessel and that comes in direct or indirect contact with seafood should have evidence to demonstrate that the ice is made from water or seawater that is fit for its intended purpose. On delivery, ice should be inspected and rejected if it could have been contaminated due to the delivery method or if contamination is evident (e.g. from dust, chemicals, foreign matter).

6.4.5 Sampling and testing

(1) All operators, other than those using town-supply water that is not treated by the operator, secure own-supply water, and seawater on a vessel, must test the water before it is first used for processing at the point of use to confirm that it meets the standard requirements for water and the applicable water-use criteria.

(2) Testing carried out to demonstrate compliance with the PSP Notice (other than chlorine, pH or turbidity) must be carried out by an accredited laboratory with the required tests within the laboratory's scope of accreditation.

(3) Chlorine, pH or turbidity measurements must be carried out by a suitably skilled person using documented tests and/or calibrated equipment.

Guidance

It is recommended that town-supply water that is not further treated by the operator is initially tested before use against the standard requirements for water, but this is not mandatory.

If exporting, operators should check the OMARs to see whether sampling is required for town-supply water that is not further treated.

6.4.6 **Reticulation** [PSP Notice C1.24]

(1) Operators using any water source other than water on a vessel, must document and implement procedures to ensure that the reticulation system meets the requirements of PSP Notice C1.24.

Guidance

The reticulation procedures should also include:

- an up-to-date plan of the reticulation system; and
- procedures for systematic checks:
  - on all water reticulation pipe work, equipment, and storage facilities;

- on the integrity of all backflow prevention devices and valves connecting water reticulations for water that is fit for purpose (e.g. potable water) and water that is not fit for purpose (e.g., non-potable water); and
- for evidence of leaks.

The procedures for ongoing checks and actions may include for example:

- roof water: checking that the gutters are cleaned out monthly;
- holding tanks: ensuring that the tanks are inspected and maintained annually and cleaned when necessary.

(2) The reticulation system must be designed, installed and operated in a manner that prevents:

a) cross connections between water, seawater (if being used) and water that is not fit for purpose;
b) stagnant water (i.e. no dead ends or unused pipes in the system); and
c) back flow that may cause contamination of the water supply.

(3) All water lines in processing areas must be identified so that water, seawater and water that it not fit for use in that area water lines are distinguishable.

(4) Water lines conveying water that it not fit for use in that area should be clearly identified at:

a) all outlets;
b) junctions and valves;
c) both sides of all wall penetrations; and
d) any other place where identification is necessary to distinguish water type.

Guidance

Water lines may be identified using the codes described in NZS 5807:1980 Industrial Identification by Colour, Wording or Other Coding. The identification system used should be documented in the RMP.

(5) Water pipes, storage tanks and facilities, and other parts of the reticulation system must be maintained in a condition that ensures that the required water standard is delivered at point of use.

(6) The reticulation system should be flushed to ensure that stagnant water, rust, scale and other material is flushed out of the system (i.e. taps are opened at point-of-use to allow a significant flow of water to occur) when:

a) water is not used for an extended period; and
b) after any repairs to the system.

6.4.7 **Water-use plan** [PSP Notice C1.15]

(1) Procedures for water must be documented and implemented for:

a) Town-suppy water used in a land-based premises (whether or not it is further treated by the operator);
b) Own-source water used in a land-based premises (whether or not it is treated); and
c) Seawater used in a land-based premises.

(2) The water-use procedures must include the requirements set out in PSP Notice C1.15

Guidance

If you are supplying your own water, these requirements may be addressed by completing the Own-source water checklist and template water-use plan (non-dairy).

6.4.7.1 Routine Monitoring

(1) The minimum frequency for monitoring compliance with the standard requirements for water in a land-based premises is set out in PSP Notice Table 1: Monitoring frequencies for seawater on land-based premises and PSP Notice Table 2: Monitoring frequencies for other water on land-based premises.

(2) Operators that have identified water-use criteria (e.g. for biological, chemical or radiological hazards) must specify the frequency of monitoring of those criteria considering the criteria in PSP Notice C1.17(4) (see section 6.3).

Guidance

If water is supplied by the operator and is assessed as being secure when completing the Own-source water checklist and template water-use plan (non-dairy), routine monitoring is not mandatory.

Ongoing routine monitoring of town-supply water without further treatment is also not required. However, simple, low cost techniques such as routine monitoring of free available chlorine levels, taste and odour can be used to pick up changes in water quality.

(3) When carrying out routine monitoring, operators must:

a) use a suitably skilled person (also see Part 12)
b) record the location of each sampling point so the source can be identified (this could be done by identifying the water sampling points on the reticulation plan);
c) ensure that samples are handled and transported so there is no significant change in the quantitative value of the determinands; and
d) ensure that samples for microbiological analysis are analysed promptly.

(4) If the standard requirements for water or water-use criteria are not met, action must be taken to ensure that the water is fit for purpose at point of use. (See section 6.4.9)

Guidance

When sampling, you should take samples from a number of points in the reticulation system to ensure that the samples are representative of the system as a whole.

If the laboratory cannot analyse samples within 1 hour of collection the operator should:

- immediately chill the samples to 10°C or cooler (but do not freeze) and deliver them to the laboratory within 6 hours of collection; or
- immediately chill the samples to 2 - 5°C and deliver them to the laboratory within 24 hours of collection.

Total coliforms or faecal coliforms may be included in the monitoring procedures. This covers a wider range of bacteria than when only testing for *E.coli,* that can then give an early warning sign that there may be problems with the water supply. Total coliforms or faecal coliforms should not be detected in any 100 ml sample.

Some export markets may expect operators to use total coliforms as part of the water monitoring procedures. Check the OMARs for the relevant market to ensure your water monitoring procedures meet the requirements for the appropriate market.

(5) Operators who cease processing for a period of time (e.g. several months of “off season”) may suspend routine monitoring provided:

a) there is no holding, processing, packing or storage of seafood during the period when monitoring is suspended; and
b) the procedures to be followed before processing, packing or storage of seafood recommences are implemented to ensure that the water is fit for purpose.

6.4.8 Water Treatments

Guidance

Examples of water treatments that may be applied include chlorination, ultraviolet treatment, ozone treatment, heating and filtration. Discuss with your supplier the type and frequency of routine monitoring necessary to confirm the effectiveness of the treatment and to ensure that it does not adversely affect the water.

6.4.8.1 Chlorine Disinfection [PSP Notice C1.18]

(1) If a water supply is treated with chlorine, a residual free available chlorine level of at least 0.2 mg/L (ppm) and not greater than 5 mg/L must be maintained throughout the reticulation system.

(2) The system must be designed so that the chlorine has a minimum contact time of 30 minutes (or alternative time determined by the suitably skilled person based on the characteristics of the pathogens to be inactivated, the treatment to be applied and the characterictics of the water) prior to use of the water, and be routinely monitored to demonstrate that there has been adequate disinfection.

Guidance

Options for monitoring include:
- fitting automatic water chlorination systems with alarm devices that indicate when the systems have ceased to function correctly; or
- manual checking of the system.

The Drinking Water Quality Assurance Rules 2022 can be used as a resource for determining treatment options and operational parameters.

6.4.8.2 Ultra-violet (UV) Light Disinfection

(1) If UV treatment is used, the disinfection unit must be adequate to disinfect the maximum flow for the system it is to serve.

(2) UV light water disinfection systems should be fitted with monitoring and alarm systems to automatically shut down the water supply to the UV water treatment unit, in the event of:

a) power failure to the treatment unit;
b) lamp failure of the treatment unit; or
c) excessive water turbidity.

Guidance

If UV treatment is being used for enhanced water quality, an alarm is not necessary.

As UV disinfection has no residual sanitising ability, UV-treated water can be re-contaminated immediately after treatment. To minimise the opportunity for recontamination there should be no holding tanks or reservoirs between the disinfection unit and the point of use.

6.4.9 Corrective actions [PSP Notice C1.23]

(1) Corrective action procedures must describe the actions to be taken if water is or may not be fit for its intended purpose (including as a result of advice recieved from a supplier, water monitoring (including biological or chemical criteria), or the water reticulation system becomes contaminated).

(2) The procedures must include:

a) whether processing using that water can continue and if so how;
b) how the water will be made fit for its intended purpose;
c) an assessment to determine any preventative actions; and

d) how any potentially affected product will be dealt with (in accordance with Part C6 Non-conforming animal material or animal product).

Guidance
To minimise downtime in the event of microbiological contamination it is recommended that operators have a procedure to super-chlorinate the reticulation system. Examples of how this could be done are to:

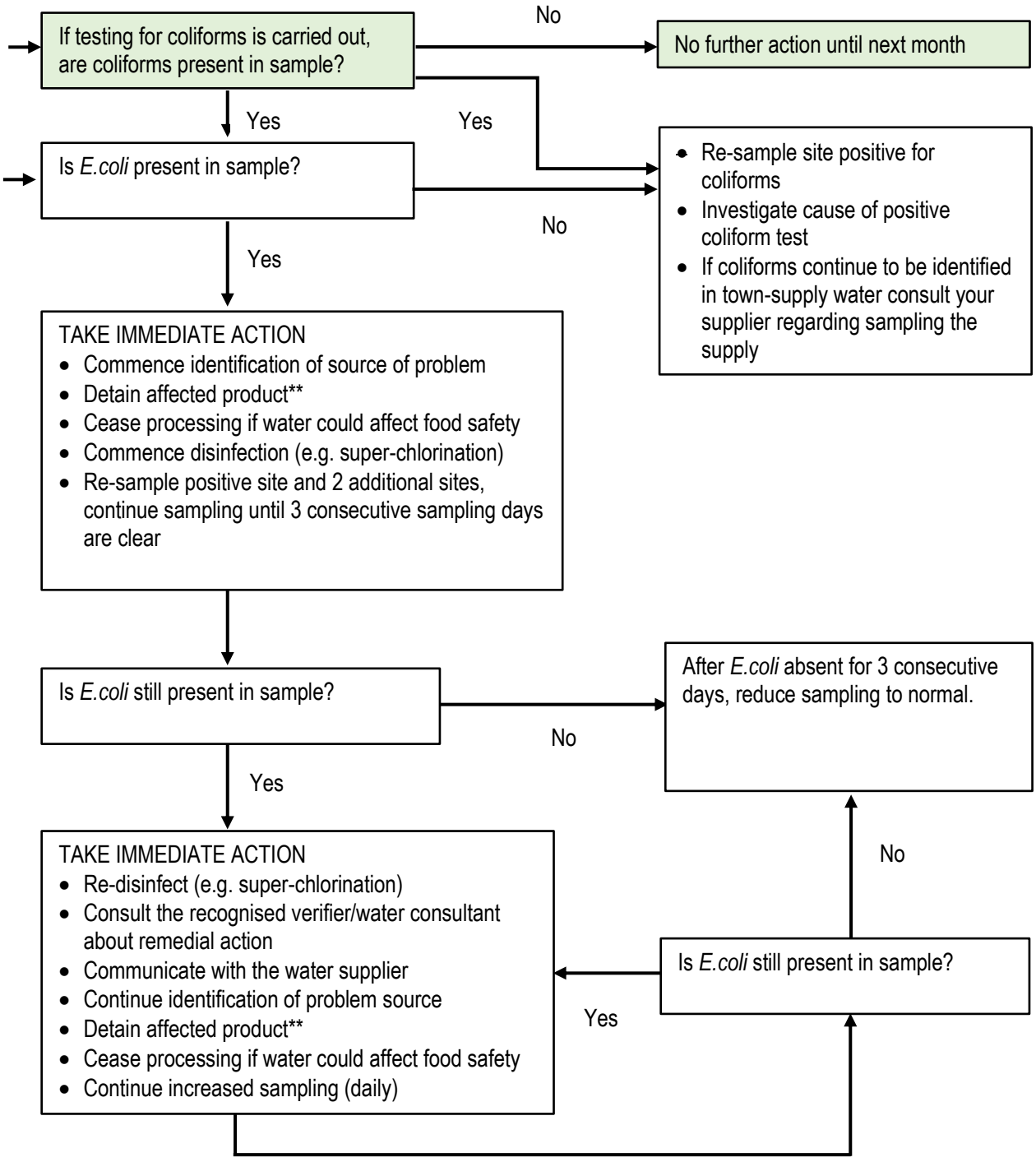
- Flush the entire system including, storage tanks and distribution pipes with super-chlorinated water (>40 ppm) for at least 30 minutes, followed by an overnight soaking (12 hours) of the entire system with super-chlorinated water. After the overnight soaking, test the water for free residual chlorine at the point of use from 5 randomly selected sampling points, and then drain the water out. If no residual chlorine is detected, repeat the super-chlorination procedure. Otherwise refill the system.
- Flush the entire water system with super-chlorinated water at 200 ppm and leave for 30 minutes. After the 30 minutes soaking, test the water for free residual chlorine at the point of use from 5 randomly selected sampling points and drain the water out. If no residual chlorine is detected, repeat the super-chlorination procedure. Otherwise rinse the system and refill it.

(3) All operations requiring the use of water or seawater must cease if the water is not fit for use and:

a) the operator fails to comply with any of the requirements of the water-use plan (including corrective actions); and
b) there is no other means described in the RMP to ensure the water it fit for its intended purpose at the point of use.

(4) If the operator detects coliforms, faecal coliforms or *E. coli* in the water supply at the point of use, the corrective actions in Figure 2 should be followed.

Figure 2: Corrective actions for microbiological non-compliance in water



6.4.10 Handling and Disposition of Contaminated Materials or Products [APA Section 17, AP Reg 70, PSP Notice Part C6]

(1) If contamination with water or seawater that is not fit for its intended purpose occurs:

a) affected material or product must be dealt with so that it becomes fit for its intended purpose, or it must not be used for human consumption and appropriate disposition should be determined by a suitably skilled person;
b) affected product contact surfaces must be cleaned and sanitised prior to reuse; and
c) affected packaging materials and containers that cannot be effectively cleaned and sanitised must not be used for packing of any product.

6.4.11 Reassessment of water other than seawater on a vessel [PSP Notice C1.22]

(1) Operators must reassess the water supply if there are changes to the water source (including seawater intakes) or water reticulation or treatment system that may negatively impact the water quality.

(2) Water must be reassessed if any repairs or alterations are made to the water reticulation system or water supply that may negatively affect the water quality, prior to the use of the water.

(3) Operators must reassess the water supply:

a) at least once every 3 years (e.g. by completing the Water Supply Assessment Checklist); and
b) if a new source of water is to be used (i.e the source changes or a new source is added), the assessment in section 6.4.11 (1) must be completed prior to use of the water; and
c) if there are any changes to the environment in or around the water source that may affect the water quality the assessment must be completed within 1 month.

Guidance

In the case of town-supply water that is not further treated by the operator, the 3 yearly reassessment should focus on the reticulation system and intended purpose of the water to ensure that the water supply remains fit for the purpose for which it is being used, and if changes have been made to the premises or processing that have not considered the impact on water. You may test the water to confirm that the standard requirements for water are met.

If using own-source water, working through the Own-source water checklist and template water use plan (non-dairy) (if used) is recommended.

Also see the procedures for non-complying products in Part 26.

6.5 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures. These must include:

a) water assessment records (if required for the water source and/or treatment);
b) a plan of the reticulation system and records of checks;
c) monitoring carried out (including results), problems identified and corrective actions taken;
d) results of any other analysis undertaken; and
e) training records for suitably skilled people

Guidance

Examples of other records that may be used to demonstrate compliance are:

- daily checks; and
- evidence from water supplier.

Refer to Part 19: for record keeping requirements.

Part 7: Cleaning and Sanitation

7.1 Purpose and Scope

To ensure the effective cleaning and sanitation of the premises, facilities and equipment so as to prevent or minimise the contamination of seafood products.

7.2 Sources of Hazards

Source	Examples of hazards
Facilities and equipment	Bacterial pathogens (e.g. *Listeria monocytogenes*, *E. coli* spp.) Chemical residues (allergens)[4]
Waste	Bacterial pathogens (e.g. *E. coli* spp., *Salmonella* spp.)
Cleaning chemicals	Chemical residues
Cleaning implements (e.g. mops, cloths)	Bacterial pathogens (e.g. *Listeria monocytogenes*, *E. coli* spp.) Physical hazards (e.g. metal fibres, bristles)

7.3 Mandatory Requirements

AP Reg 43 How premises, etc, must be operated

(1) The operator of a risk management programme must ensure that premises, places, facilities, equipment, and essential services are operated in a manner that minimises and manages the exposure of animal material, animal product, or other input to risk factors.

(2) For the purposes of subclause (1), the operator must have regard to the following:

a) the animal material or animal product to be processed or produced; and
b) the operational capability and capacity of the premises or places, facilities, equipment, and essential services.

AP Reg 50 Operator must ensure appropriate cleaning and sanitising procedures

(1) The operator of a risk management programme must ensure that cleaning and sanitising procedures are carried out using materials (including maintenance compounds) and equipment in a manner that ensures—

a) the suitability of animal material for processing; and
b) the fitness for intended purpose of animal product.

(2) Supplementary notices may, for the purposes of this regulation, specify further requirements relating to cleaning and sanitising procedures, including the materials and equipment used.

PSP Notice C1.6 – Cleaning and sanitising [relevant clauses]

(1) Operators must have procedures for cleaning that set out all the following:

a) what must be cleaned and (if appropriate) sanitised, and when and how:
b) which approved maintenance compounds or other maintenance compounds must or may be used:

[4] If intending to separate certain allergens.

c) any other requirements (such as rinsing or drying) necessary to ensure that surfaces will not be a source of contamination:
d) how the effectiveness of cleaning and sanitising is monitored:
e) what records of cleaning and sanitising are kept:
f) what corrective actions must be taken if cleaning or sanitising:

i) is found to be ineffective; or
ii) results or may result in contamination of animal material or animal product.

(2) In premises that have cleaning in place (CIP), procedures for cleaning must also:

a) identify all CIP circuits; and
b) identify the equipment that is subject to CIP; and
c) set relevant CIP parameters (such as the cleaning cycle, frequency, temperature, flow rate, chemical strength), and
d) specify how the monitoring of CIP solutions is done and records are kept; and
e) identify what things require cleaning out of place or manual cleaning.

7.4 Procedures

[APA section 17, AP Reg 10, 43, 50-53, PSP Notice C1.6, C1.8, C1.9]

7.4.1 Cleaning and sanitation procedure

(1) An effective cleaning and, where appropriate, sanitation procedure must be documented and implemented for processing areas, equipment, storage areas, support areas, amenities and external areas.

(2) The cleaning and sanitation procedure should include the following information:

a) Personnel or position responsible;
b) any specific skills needed;
c) areas/equipment to be cleaned;
d) procedures for all cleaning and sanitising operations, including methods, frequencies and sequence of cleaning;
e) approved maintenance compounds (detergents/sanitisers) to be used, their concentration, application method, and contact time, if applicable;
f) cleaning equipment to be used and how it is cleaned/sanitised after use;
g) monitoring procedures and record forms;
h) methods of verifying the effectiveness of the cleaning and sanitation; and
i) corrective actions.

Guidance

For the requirements for approved maintenance compounds see Part 10.

A basic wet cleaning and sanitising procedure usually involves:

- removal of gross contamination (e.g. scraps);
- rinsing the area with cold or warm water (60°C or cooler to prevent coagulation of protein);
- applying a detergent solution or foam and leaving it on all surfaces for the time specified by the manufacturer;
- scrubbing surfaces to loosen and remove dirt;
- rinsing with water and draining;
- if scale has to be removed, an acid detergent is used at this stage, followed by rinsing and draining;
- applying a chemical sanitiser and leaving it on all surfaces for the time specified by the manufacturer;
- rinsing off the chemical sanitiser with water and draining; and
- allowing surfaces and equipment to dry.

Staff performing cleaning duties should inspect their own work and report to their supervisor if the methods or chemicals used do not produce the expected results.

Validation
When validating the effectiveness of a cleaning and sanitising procedure-, it may be possible to obtain information from chemical suppliers about the bactericidal properties of approved maintenance compounds. Provided they are being used in accordance with the recommendations, this information could be used to support other evidence, such as visual or other sensory assessments and testing.

Many microbiological techniques are also available to validate a cleaning and sanitising procedure , including swabs and contact slides. Product contact surfaces such as conveyor belts, tables, bins, knives, etc. should be selected for sampling and also non-contact surfaces such as floors, drains, underneath tables and equipment. Swabs should be taken after the last step in the cleaning process and sites should be sampled under essentially the same conditions each time (same day, time, etc.), so that comparisons can be made over time. To validate a procedure, sample every day for at least a week to allow for normal variation. Revalidation may be necessary if changes are made or new equipment is introduced.

Microbiological criteria
Microbiological criteria for surfaces after cleaning and sanitising vary widely. The appropriate criteria to apply depends on the product, process and 'risk area'. Various aerobic plate count (APC) levels have been suggested including <2.5 cfu/cm^2 (Winfield and Campbell, 1990; Griffith, 2005), <10 cfu/cm^2 (Brown and Baird Parker, 1982; EC Decision 2001/471/EC), and <100 cfu/cm^2 (Holah, 2003). To provide an NZ example, an APC_{30} for clean product contact surfaces in raw poultry processing operations is typically <100 cfu/cm^2. Setting a lower limit for surfaces that come into direct contact with cooked or RTE products is recommended.

For guidance on operator verification of cleaning and sanitation procedure see section 18.3.

7.4.2 General Cleaning

(1) Cleaning and sanitising must be carried out in a way that does not contaminate materials, products and inputs (ingredients, additives or containers).

(2) All product contact surfaces, including equipment, should be cleaned:

a) at least at the end of each working day or at an alternative frequency that has been demonstrated to be effective;
b) whenever surfaces become contaminated or come into contact with waste;
c) when changing from processing raw seafood products to processed seafood products, and when changing from seafood product types such as from shellfish or freshwater fish (e.g. mussels, eel) to other types of fish; and
d) in the case of fishing vessels, at each break in processing.

(3) Equipment (e.g. slicers, conveyors, packing machines, containers and trolleys), maintenance tools and utensils must be thoroughly cleaned and sanitised in accordance with a cleaning and sanitation procedure [AP Reg 43], for example between uses:

a) in areas for processing products for animal consumption and for processing products for human consumption; and
b) for processing raw products and for processing RTE products; and
c) for processing products of different allergen status, if allergens are to be controlled.

(4) Cleaning and sanitising of equipment used for ready-to-eat (RTE) products should be carried out:

a) every half shift or every 4 hours; or
b) at the end of each shift; or
c) at the start of each new process operation (unless it has already been cleaned and sanitised); or

d) at a frequency that has been demonstrated to achieve the same outcome.

(5) Only cleaners and sanitisers that are approved maintenance compounds can be used in processing areas, and must be used in accordance with any conditions. See the List of Approved Maintenance Compounds and the Approved Maintenance Compounds Manual.

Guidance

Maintenance compounds should also be used in accordance with the manufacturers' instructions. Sanitising should be carried out using chemical sanitisers or hot water (82°C).

It is important that if operators are using no rinse sanitiser that they follow all the conditions of approval code C43.

For more guidance about cleaning and sanitation in areas used for ready-to-eat product processing, see: Guidance for the Control of *Listeria monocytogenes* in Ready-to-eat Foods Part 2: Good Operating Practices.

7.4.3 Wet cleaning of Processing Areas

(1) Products, packaging and other materials that may be contaminated during wash down must be removed from the area and stored in appropriate locations, or protected by covers.

(2) Floors should be cleaned by hosing or other effective means, and water drained or removed completely.

Guidance

Only low to medium pressure hosing should be used to remove seafood products soil. High pressure hosing is not recommended as it is likely to cause contamination by splashing, and create aerosols capable of carrying contaminants and micro-organisms for considerable distances.

Before sanitising, products contact surfaces and equipment should be washed in cold water that is fit for purpose (including seawater), to remove solid residues.

Other effective means of cleaning floors include sweeping, flushing and use of squeegees.

(3) Drains in the processing area (other than on fishing vessels) should be sanitised daily to reduce contamination levels and prevent foul odours.

Guidance

Drains can be sanitised during the process of rinsing sanitiser from equipment and surrounding floor areas. Pouring large amounts of sanitiser concentrate directly into drains is not recommended.

(4) Equipment (e.g. tubs) that is used for conveying material not for human consumption, should be cleaned and sanitised:

a) at the end of each working day for premises other than fishing vessels; and
b) at each break in processing on fishing vessels.

(5) Portable appliances and equipment (e.g. knives, trolleys) should be:

a) cleaned and sanitised, then stored so that they are protected from contamination (e.g. dust, splashes); or
b) cleaned and sanitised immediately before they are taken into a processing area.

7.4.4 Dry cleaning

Guidance

Dry cleaning is more appropriate in areas where low moisture product is processed or stored, and the use of water may increase the risk of microbial growth. Common dry cleaning methods will not remove all residues or sanitise surfaces, but will help to reduce the presence of contaminants and remove food sources that may lead to pest infestation. Methods include brushing, scraping, sweeping, vacuuming and the use of pressurised air, although pressurised air tends to blow contaminants from one area to another and so the lowest possible air pressure should be used. Periodic wet cleaning may also be required.

(1) A cleaning procedure should be implemented for cleaning equipment including:

a) filters (e.g. regular changing of filters) and air handling systems;
b) brushes and scrapers; and
c) vacuums, including emptying and replacing dust bags.

(2) Dry product residues should not accumulate excessively on equipment or in the environment.

(3) The moisture levels in any dust on ledges or external equipment surfaces should be insufficient to support microbial growth.

(4) Cleaning methods should minimise the creation of dust and air-borne contamination (including allergens).

(5) Dry stores should be kept dry and be cleaned regularly by sweeping or vacuuming.

(6) If wet cleaning is used in a dry processing area, all equipment and product contact surfaces should be dry before the processing recommences.

Guidance

Forced ventilation with hot air may be used where practical to shorten the drying time and ensure thorough drying.

7.4.5 Clean-in-place Systems

(1) Clean-in-place (CIP) systems must be at least as effective as those used for cleaning and sanitising disassembled equipment.

(2) When cleaning (direct or indirect product contact surfaces) in place:

a) the cleaning and sanitising solutions, and rinse water should come in contact with all interior surfaces of the equipment; and
b) all internal surfaces should be either designed for self-draining or be disassembled for draining after rinsing; and
c) pipe interiors should be constructed of highly polished stainless steel or some other appropriate smooth-surfaced material; and
d) sections of the system should be designed to be completely disassembled for periodic inspection of the internal surfaces.

(3) The CIP procedure and operating parameters must be sufficient ensure that the cleaned equipment does not have unacceptable levels of chemical residues, microbial contaminants or product residues.

Guidance

Validation of a CIP procedure should be carried under worst case conditions. When validating, it is recommended that the following information be collected:

- flush efficiency (e.g. gross soiling is removed before CIP chemicals are introduced);
- chemical concentration (start and end of the system to be cleaned);
- temperature (start and end of the system);

- flow rates;
- final flush prior to production (conductivity or other measure to ensure chemicals are removed);
- results from inspecting internal surfaces; and
- final product microbiology.

7.4.6 Cleaning of Refrigeration Facilities

(1) Chillers, refrigerators and blast freezers should be emptied, cleaned and sanitised periodically.

(2) Door handles and fixtures on refrigeration facilities that face into processing areas should be cleaned and sanitised during every major clean-down.

(3) Drains from drip trays should be flushed with cleaning detergent, rinsed and sanitiser applied.

(4) The frequency of cleaning fans, evaporators and/or fumigating refrigeration facilities should be determined based on the materials or product being stored and how the facility is used.

7.4.7 Cleaning of Storage Areas

(1) Packed products, raw materials, packaging and other inputs should be stacked and stored in a tidy manner.

(2) Adequate space must be available to allow effective cleaning in the storage area [PSP Notice C1.2(2)(a)].

(3) Spills should be cleaned up immediately, or where the spill is not a source of contamination at the next opportunity when it is safe to do so.

(4) Damaged packaged products and other materials that are no longer suitable for processing should be removed and disposed of as soon as possible.

7.4.8 Cleaning of Amenities

(1) Amenities must be cleaned regularly and maintained in a hygienic condition.

Guidance

Specific attention should be given to areas where clean protective clothing (including gumboots) is stored.

7.4.9 Maintenance and Storage of Cleaning Equipment

(1) Cleaning implements and equipment must be maintained in a hygienic condition and must not introduce any hazard or foreign object to any materials or other inputs, product, packaging or product contact surface.

(2) Cleaning equipment that will be reused (e.g. brushes) should be sanitised after each use.

Guidance

Reusable cleaning equipment should be cleaned and sanitised, then stored so that it is allowed to dry.

(3) Equipment (e.g. brushes, brooms, etc.) used for cleaning and sanitising, including on fishing vessels, must be stored in a designated area in a way that prevents contamination of products, ingredients, additives or containers [PSP Notice C1.2(2)(b)].

Guidance

Storing some cleaning equipment in designated areas within processing areas is acceptable, provided it is managed so that it is not a source of contamination.

Refer to Part 10 for information about the Control for Maintenance Compounds.

7.5 Monitoring

[APA section 17, AP Reg 10]

(1) The monitoring procedures must be sufficient to give confidence that the cleaning and sanitising procedure is operating effectively.

Guidance

Routine monitoring can include:

- pre-operational checks: visual checks of all processing areas to ensure they are clean and ready for processing. Pre-operational checks should assess whether:
  - surfaces look clean. There should be no debris (product, scales, slime, dirt, protein, oil, etc.);
  - work areas smell clean;
  - surfaces feel clean, without the presence of grease or solid particles; and
  - there is no pooling of water or presence of condensation.
- during processing: visual checks of all processing areas to ensure the cleaning procedure is effective for example between shifts and periodically during the day.

Visual inspection of cleaned surfaces is the simplest and quickest way of assessing cleanliness. Rapid test kits can also be used to verify the cleaning procedures. For example, adenosine triphosphate (ATP) may be measured. ATP is a molecule found only in and around living cells. ATP tests detect the amount of residue or organic matter (including bacteria, yeast and mould) left on a surface after cleaning.

(2) Pre-operational checks of facilities and equipment should be carried out by a suitably skilled person to ensure that operations only begin after cleaning and sanitising requirements have been met.

Guidance

Staff responsible for carrying out pre-operational checks should have good knowledge of the cleaning and sanitising methods and criteria for assessing cleanliness. They should be able to assess the potential effect of particular defects on food safety and determine appropriate corrective actions for any non-compliance.

(3) Processing must not commence until defects that would result in direct contamination of product have been corrected and rechecked. [AP Reg 43]

(4) Repetitive failures of cleaning and sanitation must be investigated and corrected to ensure that the procedure and its implementation is effective. [PSP Notice C1.6]

7.6 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) These records must include:

a) the monitoring carried out, problems identified and corrective action taken; and
b) verification of cleaning records (e.g. reality checks, chemical strength tests, microbiological tests).

Guidance

Examples of records that could be used to demonstrate compliance are:

- list of approved maintenance compounds;
- validation records; and
- training records for suitably skilled persons.

Refer to Part 19: for record keeping requirements.

Part 8: Personal Health and Hygiene

8.1 Purpose and Scope

To ensure that all personnel are medically fit to perform their duties, and that they comply with good hygienic practices. Personnel include all staff, contractors, and visitors.

8.2 Sources of Hazards

Source	Examples of hazards
Personnel	Bacterial pathogens (e.g. *Salmonella* spp., *E. coli* spp., *Staphylococcus aureus*) Hepatitis A virus, Norovirus
Clothing, protective equipment (e.g. earmuffs), footwear	Bacterial pathogens (e.g. *Salmonella* spp., *E. coli* spp., Clostridium spp.) Chemical residues (e.g. sanitisers, allergens[5]) Physical objects (e.g. parts of rubber gloves, pieces of plastic)
Personal items	Metal objects (e.g. jewellery, pens, hair clips)

8.3 Mandatory Requirements

AP Reg 55 Protecting against contamination by people [relevant clauses]

Personal hygiene

(1) The operator of a risk management programme must ensure that any person at the premises or place—

a) follows an appropriate routine of personal hygiene that minimises the risk of contamination of animal material and animal product; and
b) behaves in a way that minimises the risk of contamination of animal material and animal product.

Health of persons

(2) The operator of a risk management programme must ensure that any person at the premises or place who is known to have or suspected of having an illness or condition does not, directly or indirectly, contaminate animal material or animal product.

(3) Complying with subclause (2) includes that the operator must ensure that—

a) any person who is known to have or suspected of having an illness or condition is excluded from areas where animal material or animal product may be contaminated, directly or indirectly; and
b) there is a system for persons to report to the operator if they have or suspect they may have an illness or condition; and
c) there is an appropriate assessment of—

i) whether a person no longer creates a risk of contamination; or
ii) whether and how the risk can be appropriately managed.

(4) For the purposes of this regulation, illness or condition means an illness or a condition that can be transmitted from humans through animal material or animal product.

[5] If intending to exclude certain allergens.

Clothing and equipment

(5) The operator must ensure that any person whose presence or actions may contaminate, directly or indirectly, animal material or animal product wears appropriate clothing and equipment that minimises the risk of contamination.

PSP Notice C2.2 – Health of persons [relevant clauses]

(1) The operator of an animal product business must ensure that a person does not handle animal material or animal product, or enter an area where they may adversely affect the animal material or animal product, if the person is:

a) known or suspected of being infected with, or a carrier of, an infectious disease in a communicable form as described in the disease control table (see subclause (3)); or
b) suffering from acute respiratory infection; or
c) suffering from boils, sores, infected wounds or any other condition that cannot be adequately prevented from becoming a source of contamination.

(2) The operator must ensure that if any person within the boundary of the RMP has been suffering from an illness or condition described in subclause (1)(a), the person follows any exclusion and clearance criteria in the disease control table (see subclause (3)).

(3) In this clause, the **disease control table** is Table 2.4 (Pathogen or Disease-Specific Exclusion and Clearance Criteria for People at Increased Risk of Transmitting an Infection to Others) in Appendix 2 of the Te Whatu Ora Communicable Disease Control Manual.

(4) Any animal material or animal product that has, or may have, been affected by a failure to comply with this clause must be managed as if it may be non-conforming animal material or animal product in accordance with Part C6 (Non-conforming animal material or animal product).

8.4 Procedures

[APA section 17, AP Reg 10, AP Reg 55]

8.4.1 Health of Personnel [PSP Notice C2.2]

(1) Effective procedures must be documented and implemented to ensure that any person including staff, visitors and contractors do not contaminate food or associated things as consequence of a health condition.

(2) The operator must ensure that all staff understand relevant health and hygiene requirements and that visitors and contractors are made aware of these requirements.

Guidance

The conditions under PSP Notice C2.2, together with their exclusions criteria are summarised in Table 4.

The exclusion criteria below are examples taken from Table 2.4, Appendix 2 of the of the Te Whatu Ora Communicable Disease Control Manual, and the PSP Notice. Please refer to the link above for the most up-to-date information.

Table 4: Health conditions and exclusion criteria

Illness/condition	Exclusion criteria.
Acute gastroenteritis (including due to Bacillus species, *Clostridium perfringens*, Cyclospora, *Staph. aureus, E.coli* VTEC/STEC, *Shigella*	Exclude until symptom free for 48 hours.

sonnei),salmonellosis, campylobacteriosis, cryptosporidiosis, giardiasis, listeriosis, yersiniosis, norovirus and rotavirus	
Hepatitis A	Exclude until seven days after onset of jaundice and/or other symptoms.
Cholera, Shigellosis (*Shigella Boydii*), Vibrio cholerae O1 or O139	Exclude until symptom free for 48 hours and 2 consecutive negative stools have been provided at least 48 hours apart.
Typhoid and paratyphoid fever	Exclude until symptom free for 48 hours and 3 consecutive negative stools have been provided at least 48 hours apart after completing treatment with antibiotics. If not treated with antibiotics, no earlier than 1 month after on-set of symptoms. Carriers, including chronic: a risk assessment should be carried out to consider safe arrangements for continuing work, or for alternative work.
Amoebic dysentery	Exclude until symptom free for 48 hours and one negative stool at least one week after completing treatment.
Skin conditions e.g. boils, sores, infected wounds, or any other condition that cannot be adequately protected	Exclude until a suitably skilled person* confirms that the condition is not likely to contaminate the food, or where possible, cover the wound so that it is not source of contamination. Depending on the condition, the suitably skilled person will need to be a medical practitioner.
Other	Exclude until a medical practitioner confirms that the person is no longer likely to contaminate food.

*The suitably skilled person should have sufficient knowledge and experience to make this determination (e.g. someone with first aid or nursing qualification).

(3) Persons (including staff, visitors and contractors) must inform the person responsible for operations if they are (or suspect that they are) suffering from gastroenteritis, diarrhoea, acute respiratory infection, skin conditions or any other illness listed in Table 4. [AP Reg 55(3)]

(4) Any injury, wound, or cut sustained during processing must be treated immediately and dressed with a secure waterproof dressing to prevent contamination of materials, products, packaging or equipment, with blood or other fluid discharge.

(5) Dressings must be kept clean and properly secured to prevent them from becoming loose or falling off.

Guidance

To protect the dressing from moisture, staff should wear gloves (for wounds on the hands), and protective sleeves or clothing over wounds on the forearm. Brightly coloured dressings are recommended.

8.4.2 Hygienic Practices

(1) Procedures for personal hygiene that apply to all staff in food handling, preparation and related areas, and to all contractors and visitors must be documented and implemented.

(2) Personnel in processing areas should:

a) not wear insecure jewellery; and
b) remove from their hands any jewellery that cannot be adequately sanitised.

Guidance

Plain wedding bands (i.e. no stone) are acceptable, as long as they cannot be easily dislodged and can be effectively cleaned in the same manner as hands. Devices such as a medical alert necklace or cultural gifts such as a taonga necklace are also acceptable, if they are securely worn under clothing.

(3) Personal items such as sweets, cigarettes, false finger nails or eyelashes are not to be taken into or worn in processing or packing areas as they may result in contamination of material or product.

(4) The following activities are not permitted inside processing or packing areas:

a) eating food;
b) smoking or vaping;
c) spitting; or
d) any other activity that may cause contamination of any material, product or products contact surfaces.

8.4.3 Protective Clothing

(1) All personnel who enter any processing or packing area must wear suitable, clean protective clothing and foot wear.

(2) Suitable protective clothing (e.g. coats, overalls, aprons, plastic sleeves (waterproof armbands), hair restraints, and gloves) includes being:

a) visibly clean at the start of each day's operation; and
b) of a colour that does not disguise contamination.

Guidance

Protective clothing for staff working in live fish areas should not be a source of contamination and should be appropriate to the task(s) being performed.

(3) Staff who handle exposed product should wear protective clothing that suitably covers all street clothing, along with a water-proof front or a waterproof apron. If clothing sleeves are below the elbow, staff should wear waterproof arm covers or waterproof sleeves.

Guidance

Hair restraints include paper, cloth or plastic hats or hair nets. Several types of beard masks and all-over hat styles are available for personnel with full beards. Each operator should set their own policy on acceptable facial hair length.

Protective gloves should be non-absorbent, and may be either single use or reusable. Disposable gloves and plastic sleeves should meet the composition and conditions of use requirements for indirect food additives (polymers) in the US Code of Federal Regulations, Title 21, Part 177, or relevant EU standard.

Protective clothing in colours other than white can be used as long as contaminants are visible so that appropriate actions can be taken. If assigning colours to different areas or activities, the type of the work being carried out should be considered.

(4) Reusable gloves should be washed and sanitised at meal breaks, at the end of each working day, or whenever contaminated.

(5) All protective clothing and personal equipment should be:

a) kept in good condition, changed (or in the case of waterproof clothing, cleaned) at least daily, or more often if it becomes excessively contaminated; and
b) stored so that it is protected from contamination when not in use.

(6) Staff (other than in areas used for live fish pack-out) should use boot wash facilities or foot baths to clean footwear before, or on, entering processing areas and must change other protective clothing (e.g. overalls, hats) if it becomes contaminated from the external environment.

(7) Staff handling exposed product should not wear waterproof protective clothing (e.g. aprons, plastic sleeves, gloves) or equipment (e.g. knives and steels) outside the processing area, except in the case of emergencies.

8.4.4 Designated Areas

(1) If designated areas are used, procedures for their use must be documented and implemented.

Guidance

The purpose of designated areas is to allow staff to go outside during breaks without having to change out of all protective clothing, as long as precautions are in place to minimise contamination. Protective clothing should only be worn in designated access ways or areas, and not off-site. This practice is not recommended if producing high risk products (e.g. ready-to-eat products).

The designated area procedures should include:
(a) a description (or diagram) of the areas where protective clothing may be worn;
(b) the cleaning procedure for the designated areas;
(c) instructions for staff on the use of designated areas and conduct in those areas so that contamination of protective clothing is minimised;
(d) the checks to be carried out to ensure that personnel comply with the procedures; and
(e) the records to be kept to demonstrate compliance with these requirements.

8.4.5 Hand Washing and Sanitising

(1) All staff must follow an appropriate hygiene routine, which includes thoroughly washing (with hand detergent and water), drying and sanitising hands (where appropriate):

a) when entering any processing or packing areas;
b) before handling any materials, products or exposed packaging;
c) after using the toilet;
d) after handling or coming into contact with waste and contaminated surfaces or material;
e) if working in a raw product area, before entering a cooked or ready-to-eat product area;
f) if swapping between products of different allergen status (if allergens are to be controlled); and
g) any other time when hands may become contaminated (e.g. after coughing, sneezing or blowing the nose).

Guidance

Handwashing should involve:
- washing hands using warm running water and soap, rubbing vigorously (front, back and between fingers); and
- dry hand thoroughly (front, back and between fingers).

The use of hand sanitisers is not a substitute for hand washing.
For further information, refer to the MPI document Handwashing and drying – Evidence for Efficacy.

(2) In addition to hand washing, hand sanitisers should be used in areas where cooked or ready-to-eat products is processed or packed.

(3) Any chemical used must be an MPI approved maintenance compound and used in accordance with the manufacturers' instructions. For further information see: List of Approved Maintenance Compounds and the Approved Maintenance Compounds Manual. [AP Reg 53, PSP Notice C1.8 and C1.9]

(4) Hands should be thoroughly dried using disposable paper towels, or other hand drying facilities that do not contaminate washed hands or the surrounding area (e.g. roller towels fitted with a timed automatic retraction device that removes the soiled piece of towel immediately after use).

8.4.6 Hygiene when moving between areas of different hygiene status

(1) Product handlers and other persons who move from areas of a lower hygienic status to a higher hygienic status must take adequate measures to minimise contamination to material and product. [AP Reg 55]

Guidance

Hygiene routines for staff and other persons moving between areas of different hygiene status will depend on the risk of contamination. Operators should consider the need for:

- hand washing;
- changing or cleaning/sanitising outer protective clothing (aprons); and
- cleaning/sanitising footwear.

(2) Staff who work in raw products areas should change their protective clothing before entering areas where ready-to-eat product is produced.

(3) Staff assigned to work in dedicated areas where materials for animal consumption are handled (e.g. fish meal operators):

a) should wear some form of identification to distinguish them from other processing operations; and
b) before entering areas processing products for human consumption should:

i) remove any contaminated outer clothing, footwear or protective coverings;
ii) follow an appropriate hygiene routine, which includes thoroughly washing, drying and sanitising hands; and
iii) dress in clean protective clothing as described in sections 8.4.3(1) to (3).

Guidance

This applies to staff working in dedicated areas processing products for animal consumption. It is intended to prevent contamination of products for human consumption if staff are required to enter those areas.

If handling material derived from normal processing, which is intended for bait, further processing for animal consumption or disposal, dedicated protective clothing is not required. The operator should consider the potential for contamination and implement measures to mitigate against this.

8.4.7 Visitors and Contractors

(1) Visitors and contractors who enter a processing or packing area must comply with the operator's documented health requirements and follow all hygienic practices and procedures required for product handlers. [AP Reg 55]

(2) Visitors and contractors should be supervised by a staff member while within the premises, unless they have been inducted and are familiar with the required hygienic practices.

8.5 Monitoring

[APA section 17, AP Regs 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

Guidance

The frequency and type of monitoring will depend on the nature of the operation. Monitoring options could include the following daily checks:

- before processing: checks to confirm all staff are following correct procedures for wearing protective clothing, and for entering the processing areas; and
- during processing: checks to confirm that all staff are complying with requirements for personal hygiene and hygienic work practices.

8.6 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) These records must include:

a) the monitoring carried out, problems identified and corrective action taken;
b) medical certificates or assessments of staff; and
c) training records for persons involved in key tasks.

Guidance

Examples of other records that could be used to demonstrate compliance are:

- pre-operational or daily checks;
- designated area checks;
- list of approved maintenance compounds (e.g. hand sanitisers).

Refer to Part 19 for record keeping requirements.

Part 9: Control of Contamination and Waste Management

9.1 Purpose and Scope

To ensure that contamination is minimised and that seafood product is fit for its intended purpose.

9.2 Mandatory Requirements

AP Reg 43 How premises, etc, must be operated

(1) The operator of a risk management programme must ensure that premises, places, facilities, equipment, and essential services are operated in a manner that minimises and manages the exposure of animal material, animal product, or other input to risk factors.

(2) For the purposes of subclause (1), the operator must have regard to the following:

a) the animal material or animal product to be processed or produced; and
b) the operational capability and capacity of the premises or places, facilities, equipment, and essential services.

AP Reg 47 Operator must manage waste

The operator of a risk management programme must ensure that waste is collected, managed, and disposed of in a manner that—

a) minimises contamination of animal material and animal product and associated things; and
b) prevents it from being used for animal material and animal product; and
c) prevents it from attracting or harbouring pests.

AP Reg 58 Processing must minimise contamination and deterioration [relevant clauses]

(1) The operator of a risk management programme must ensure that animal material, animal product, and other inputs are processed and handled in a way that manages and minimises their contamination and deterioration.

PSP Notice C1.11 – Waste [relevant clauses]

(1) Operators must have procedures that set out how waste is to be managed, stored, removed from the premises, and disposed of.

(2) Waste must not be allowed to accumulate in or around processing areas.

(3) Waste storage areas at premises must be:

a) identified or identifiable; and
b) clearly separated from any stored animal material, animal products, or other inputs.

(4) Implements and equipment used for collecting, storing, or treating waste must be:

a) identified or identifiable as for use only with waste; and
b) stored when not in use in a designated area.

PSP Notice C1.26 – Ventilation [relevant clauses]

(1) Natural or mechanical ventilation must be adequate to maintain air temperature and relative humidity at a level that ensures that:

a) animal material and animal product is not adversely affected; and

b) personnel required to work in the area are not affected in a way that could adversely affect the animal material or animal product.

(2) Air pressure differential between areas is maintained when positive pressure is required within a processing area.

(3) Filtration systems used for ventilation and product contact air must be maintained to ensure adequate ongoing performance of the system.

PSP Notice C4.2 – Storing animal material and animal product [relevant clauses]

(3) Any animal material not suitable for processing for human consumption, and any animal product not fit for human consumption but fit for some other purpose, must:

a) be stored in a manner that ensures it is separated from, and is not a source of contamination to, animal material or animal product for human consumption; and
b) be kept under controlled conditions until it is adequately identified in a manner that ensures it will not be mistakenly or fraudulently released as suitable for processing or fit for human consumption.

PSP Notice C6.2 – Managing animal material and animal product that may be non-conforming [relevant clauses]

(1) Animal material and animal product that may be non-conforming (which, in relation to red meat, includes suspect animal material) must be managed under clause C6.3 as non-conforming animal material or animal product unless or until a suitably skilled person determines that it is not non-conforming.

(2) The operator of an animal product business must have procedures for how a suitably skilled person determines whether animal material or animal product that may be non-conforming is in fact conforming animal material or animal product.

PSP Notice C6.3 – Managing non-conforming animal material or animal product [relevant clauses]

(2) Procedures for managing non-conforming animal material or animal product must, at a minimum:

a) require that the management and disposition of the animal material or animal product is managed by a suitably skilled person; and
b) specify how the non-conforming animal material or animal product is identified and managed so as to:

i) avoid contaminating other animal material, animal products, or inputs; and
ii) ensure it is not mistaken for, or released as, conforming animal material or animal product; and

c) identify the options for disposing of the animal material or animal product (such as reprocessing, downgrading, or disposing of it as waste), and the requirements for deciding which option to use in any particular situation.

9.3 Procedures

[APA section 17, AP Reg 10, AP Reg 43, 47, 58]

9.3.1 Contamination from Waste Water

(1) Procedures for controlling contamination from waste water must be documented and implemented.

Guidance

The procedures should address:
(a) waste water;
(b) product wash water,
(c) thawing tank water,
(d) defrost water and condensate refrigeration units;
(e) water used to clean floors, walls, or appliances;
(f) excess water used during processing; and
(g) water that is not fit for purpose.

(2) During operation, water from unclean sources must be controlled and contained so that it does not contaminate material or product. [PSP Notice C1.2(2), C1.11]

Guidance

This includes drip or splash onto products, product contact surfaces or onto any other areas where products could become contaminated; and ensuring that water does not flow across areas where people walk.

(3) All processing areas should, as far as practicable, be kept free from steam and surplus water. [PSP Notice C1.26]

9.3.2 Contamination from Equipment

(1) Procedures for controlling the movement of equipment from areas processing products for human consumption to areas processing products for animal consumption must be documented and implemented. [AP Reg 42, PSP Notice C1.2(6)]

Guidance

The procedures should cover:
(a) designation of specific areas within the premises in which particular categories of equipment can be used; and
(b) conditions for use of equipment to minimise contamination of equipment and products.

Colour coding may be used to identify portable equipment and utensils (e.g. containers, knives, cutting boards, slicers) for exclusive human/animal consumption products or raw/RTE products. Particular consideration should be given to the type of processing carried out in an area when appliances are moved from areas processing products for human consumption to areas processing products for animal consumption. Use of floor markings to define areas for particular types of equipment movement may be helpful.

(2) All hand-held equipment designated for use in processing areas, should be stored in a manner that protects it from contamination, when not in use.

(3) Product containers that can be stacked and/or have drain holes can only be used if placed above the floor (e.g. on metal gratings, or on metal or plastic surfaces raised off the floor) so as to minimise contamination.

(4) Operators should identify “bottom bins” i.e. bins that are placed at the bottom of a stack on the floor, but that are not used to contain materials or products.

9.3.3 Contamination from Material

(1) Procedures must be documented and implemented for:

a) controlling the movement of material from areas processing products for human consumption to areas processing products for animal consumption; and
b) for dealing with products that are unfit for human consumption. [PSP Notice C6]

(2) Any unpackaged products for human consumption that are moved into or through any non-processing area must at all times be managed to minimise contamination (e.g. contained and covered).

(3) Waste or products for animal consumption that are moved through any processing area must be handled in a manner that minimises contamination of products for human consumption. [PSP Notice C1.11]

(4) Material derived from normal processing (e.g. fish offal) and intended for bait, further processing for animal consumption, or for disposal as waste, can be:

a) held in a processing area until removed for such purposes; or
b) packed in a processing area, providing the operator has considered any potential contaminants and implemented measures to mitigate these.

Guidance

See Part 24 for information on processing products for animal consumption.

(5) Products intended for use as bait or for animal consumption may be stored in the same room as packaged products intended for human consumption only if they are enclosed in containers and if the risk of contamination is minimised.

9.3.4 Waste Management

(1) Procedures must be documented and implemented for the management of waste.

(2) Waste containers and associated equipment such as trolleys must not be a source of contamination.

(3) Waste containers, in processing or support areas, should be cleaned at a frequency specified in the cleaning and sanitation procedure.

Guidance

The outside and underneath of waste containers should be sanitised before re-entering a processing area or area of higher hygienic status, if they have been taken outside or moved through an area of lower hygienic status.

(4) Waste (including waste food additives and ingredients) must be:

a) managed so that it is not a source of contamination to product (including as a result of its allergen status);
b) conveyed to a waste area in a timely manner; and
c) regularly collected and disposed of. [PSP Notice C1.11].

(5) All other non-product waste (e.g. damaged packaging, disposable gloves, hats, etc.) must be regularly removed from the processing area or placed in appropriate rubbish receptacles so that it won't be a source of contamination. [PSP Notice C1.11]

Guidance

Trucks used for storing waste should be kept covered as much as practicable.

9.4 Monitoring

[APA section 17, AP Regs 10]

(1) The operator must regularly check compliance to documented procedures.

Guidance

The frequency and type of monitoring will depend on the nature of the operation and the risk if hazards are left uncontrolled. Monitoring options include daily checks to confirm that procedures such as water containment, waste management, and movement of appliances, materials, equipment and personnel are carried out correctly.

9.5 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) The records must include monitoring carried out, problems identified and corrective action take.

Guidance

Examples of other records that could be used to demonstrate compliance are:

- daily/weekly checks; and
- training records for suitably skilled persons.

Refer to Part 19: for record keeping requirements.

Part 10: Control of Maintenance Compounds

10.1 Purpose and Scope

To ensure the proper use and storage of maintenance compounds (chemicals) so as to prevent or minimise the contamination of seafood products, packaging, equipment, and the processing and storage environment. Maintenance compounds include chemicals used for cleaning, sanitation, personnel hygiene, fumigation, pest control and for repairs and maintenance. Most maintenance compounds used during processing and in the maintenance of processing areas, facilities and equipment must be approved.

Guidance

The following is the link to the list of Approved Maintenance Compounds.

The Approved Maintenance Compounds Manual outlines the requirements for use of approved maintenance compounds. In some situations when carrying out maintenance work, approval is not required. These exceptions are explained in the Manual.

10.2 Sources of Hazards

Source	Examples of hazards
Maintenance compounds (e.g. cleaning or sanitising agents, pesticides, lubricants)	Chemical residues
Chemical containers	Chemical residues

10.3 Mandatory Requirements

AP Reg 53 Use of maintenance compounds

(1) The operator of a risk management programme must use, store, transport, and handle maintenance compounds in a manner that ensures—

a) the suitability of animal material for processing; or
b) the fitness for intended purpose of animal product.

(2) The operator of a risk management programme who uses maintenance compounds must ensure that the maintenance compounds—

a) are appropriate to the task; and
b) will not cause contamination of animal material or animal product, including contamination—

i) by a maintenance compound itself; or
ii) by a substance that may result from the breakdown of materials (for example, equipment components) that a maintenance compound may come into contact with.

(3) Supplementary notices may specify—

a) when a maintenance compound approved by the Director-General under regulation 247 must be used—

i) by a particular type of animal product business; and
ii) in particular premises, or a particular place or area; and
iii) for a particular purpose or type of use; and
iv) in relation to particular equipment; and

b) further requirements relating to using, storing, transporting, and handling maintenance compounds.

PSP Notice C1.8 – Storage and use of maintenance compounds and other substances

(1) Maintenance compounds stored at premises must be stored in designated areas.

(2) Maintenance compounds must:

a) be stored in sealed containers, or in a manner that prevents the maintenance compound from being a source of contamination, or from being contaminated; and
b) be clearly labelled with the name of the maintenance compound which, if it is an approved maintenance compound, must be the name as it appears on the list of approved maintenance compounds maintained by the Director-General; and
c) be stored and used in accordance with any directions for their use or storage that are provided by the supplier.

(3) Users of maintenance compounds must, where necessary, be trained in their use and comply with the instructions for use, which must be readily available to users.

(4) Implements and containers used to store, measure, mix, or apply maintenance compounds must be clearly identified in a manner that ensures they are not used for other purposes.

(5) Adequate storage facilities must be provided for any substance stored at premises that is not a maintenance compound but may be a source of contamination of animal material or animal product.

(6) Separate and secure storage must be provided for any odorous or hazardous substances kept at the premises.

(7) Any animal material or animal product that is suspected of being contaminated, as a result of a failure to comply with the label or approval conditions of a maintenance compound, must be managed as if it may be non-conforming animal material or animal product, in accordance with Part C6 (Non-conforming animal material or animal product).

(8) This clause supplements the requirements of Regulation 53 or, for dairy manufacturers not operating under an RMP, the requirements of Regulation 149.

PSP Notice C1.9 – Use of approved maintenance compounds

(1) Only approved maintenance compounds may be used at premises or on equipment used for processing animal material or animal product, other than:

a) at dairy manufacturing premises or dairy stores (see Part D3 (Dairy manufacturing) and Part D4 (Dairy store operators)); or
b) in any area within premises, or on equipment, that is not associated with the processing or storage of animal material or animal product and where there is no possibility of the maintenance compounds affecting the animal material, animal product, or other inputs; or
c) at premises where all processing has ceased to allow for routine or planned maintenance.

(2) If non-approved maintenance compounds have been used during a period when processing of animal material and animal product has ceased to allow for maintenance, before processing recommences all parts of the premises and equipment on which non-approved maintenance compounds have been used must be cleaned using only approved maintenance compounds.

(3) This clause supplements the requirements of Regulations 52 and 53.

10.4 Procedures

[APA section 17, AP Reg 10, PSP Notice C1.8 & 1.9]

(1) Procedures must be documented and implemented for the use of maintenance compounds within the boundaries of the RMP.

Guidance

The procedures should address:
(a) handling;
(b) storage;
(c) use; and
(d) actions to be taken in the event that inputs, products or product contact surfaces are potentially contaminated or contaminated with a maintenance compound.

(2) Maintenance compounds must be used according to the manufacturer's directions and the conditions of MPI approval. [PSP Notice C1.8]

(3) When specified in the conditions of use [AP Reg 247] set out in Approved Maintenance Compounds Manual:

a) inputs, products and exposed packaging must be removed from the area or protected (e.g. covered) prior to use of the maintenance compound; and
b) equipment and other product contact surfaces must be cleaned by thorough washing after exposure to a maintenance compound (e.g. after spraying with insecticide).

(4) The operator should maintain an up-to-date list of all maintenance compounds used and held in the premises.

(5) Procedures for use must be readily available to the user (e.g. on the label, posted on the wall or in product information data sheets).

(6) When not in use, maintenance compounds must be stored so that they are not a source of contamination.

Guidance

Storage in a designated area (e.g. shelf, cupboard, room), separate from inputs, products and packaging would minimise opportunity for contamination.

(7) Maintenance compounds should be handled and used, by or under the supervision of, a suitably skilled person.

Guidance

Usually the use of maintenance compounds is considered a key task in the RMP and so the competencies for this task are expected to be specified in the RMP.

(8) All containers or utensils used for measuring, mixing or transferring maintenance compounds must be [PSP Notice C1.8 (9)]:

a) clearly identified (e.g. labelled as 'For Chemicals Only'); and
b) only used for the identified purpose.

(9) Re-use of empty chemical containers may be permitted provided that they are not be used in a way that could contaminate inputs, product or packaging.

(10) If contamination from a maintenance compound occurs:

a) affected product should be retained for assessment by a suitably skilled person, to determine its suitability for human consumption, animal consumption or for some other purpose;
b) affected product must be appropriately disposed of if it is no longer fit for any purpose;
c) affected product contact surfaces must be cleaned and where appropriate sanitised prior to re-use; and

d) affected packaging that cannot be effectively cleaned and sanitised must not be used for packing of any products and should be disposed of. [PSP Notice C1.8(7)]

10.5 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

Guidance

Monitoring options include:

- daily and weekly checks to confirm maintenance compounds are being handled and used correctly; and
- annual (or when new chemicals are purchased) checks to confirm that maintenance compounds are approved and identified on any company list.

10.6 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) These records must include:

a) monitoring carried out, problems identified and corrective action taken; and
b) training records for suitably skilled persons.

Guidance

An example of a record that could be used to demonstrate compliance is:

- The list of maintenance compounds used and held in the premises.

Refer to Part 19: for record keeping requirements.

Part 11: Pest Control

11.1 Purpose and Scope

To ensure the effective control of pests so as to prevent or minimise the contamination of seafood products, packaging, ingredients, equipment, and the processing and storage environment. Pests include rodents, birds, insects, dogs and cats.

11.2 Sources of Hazards

Source	Examples of hazards
Insects, rodents, birds, cats and dogs	Bacterial pathogen, e.g. *Salmonella*, *Campylobacter* spp., *E.coli* spp., *Listeria monocytogenes*
Pesticides	Chemical residues

11.3 Mandatory Requirements

AP Reg 43 How premises, etc, must be operated [relevant clauses]

(1) The operator of a risk management programme must ensure that premises, places, facilities, equipment, and essential services are operated in a manner that minimises and manages the exposure of animal material, animal product, or other input to risk factors.

AP Reg 54 Practices must minimise effects of pests

(1) The operator of a risk management programme must minimise opportunities for pests to infest, soil, or contaminate animal material, animal products, associated things, premises, places, facilities, equipment, or essential services.

PSP Notice C1.12 – Pest control

(1) Operators must regularly monitor premises for evidence of:

a) entry or infestation by pests; and
b) pest breeding sites; and
c) food sources for pests.

(2) Operators (other than farm dairy operators – see Part D2 (Farm dairies)) must have procedures for pest control, and they must set out at least the following:

a) the location of any pest control devices (such as bait stations and electric insect traps), by marking them on a site plan or other suitable record:
b) if some or all pest control is contracted out, the name of the contractor.

(3) Any actual or potential pest breeding sites and food sources (such as long grass, birds' nests, etc.) in and around the premises must be eliminated or minimised.

(4) Holes, drains, and similar places where pests are likely to gain access to buildings (other than farm dairies) must be sealed or covered with screens, or otherwise managed, to prevent entry by pests.

(5) Pest control devices:

a) must not be located in places where the traps or any pests caught by them may contaminate, directly or indirectly, any animal material, animal products or other inputs; and

b) must be monitored for pest activity at a frequency relevant to the type of device and, if increased pest activity is observed, that monitoring must be increased and corrective actions taken, as appropriate.

(6) Only rodenticides that are approved maintenance compounds may be used, and they must be used only in bait stations.

PSP Notice E1.2 – Dealing with contaminated product and damaged packaging [relevant clauses]

(1) If evidence of contamination by residues or by pests is found in animal material or product for human consumption:

a) the affected animal material, animal product, and other inputs must be assessed to determine its suitability for processing or fitness for intended purpose; and
b) anything affected must, as far as possible, be cleaned and sanitised before it is used again; and
c) if packaging cannot be effectively cleaned and sanitised, it must not be used for processing any animal material or animal product.

11.4 Procedures

[APA section 17, AP Reg 10, 43, 53, 54, PSP Notice C1.12]

11.4.1 Pest Control Procedures

(1) Procedures for pest control must be documented and implemented and meet the contents of PSP Notice C1.12.

Guidance

The operator may employ a pest control person or agency to develop and implement a pest control system (e.g. set up traps, spraying procedures) and monitor the premises. The operator is responsible for ensuring that the person or agency is competent to perform the task and that they meet the requirements of the APA.

Operators using a contracted pest control person or agency should also document procedures for addressing pest control problems that may arise between scheduled visits.

11.4.2 Prevention of Infestation and Access of Pests [PSP Notice C1.12(1)]

(1) Premises and facilities (including storage facilities, and water storage tanks) must be kept in good repair and condition to prevent pest access and to eliminate potential breeding sites.

(2) The external environment should be checked regularly and kept free of any food sources and breeding sites (e.g. bird's nests, long grass).

(3) Holes, drains and other places where pests are likely to gain access must be sealed, or covered with screens or similar materials that prevent the entry of pests.

Guidance

To prevent the entry of insects, birds and other pests, mesh screens should be used on windows, doors, ventilators and any other external openings into processing areas, amenities and product support areas, which may be kept open during operations.

(4) External doors and windows that open directly to processing areas and that are not screened must be kept closed at all times when not in use.

Guidance

Areas that are likely to attract flies and other insects should be sprayed, as necessary.

(5) Skip bins or other waste receptacles that are outside or in areas that are accessible to pests should be kept covered when not being filled or emptied.

11.4.3 Use of Pesticides [AP Reg 53, PSP Notice C1.9]

(1) Pest control maintenance compounds must be used in accordance with any approval conditions and label instructions.

(2) The pest control procedures should include the approved maintenance compounds used. Any rodenticides used must be approved maintenance compounds and must only be used in bait stations [PSP Notice C1.12(6)]

(3) When specified in the conditions of use set out in Approved Maintenance Compounds Manual:

a) inputs, products and exposed packaging must be removed from the area or protected (e.g. covered) prior to using pest control maintenance compounds that may contaminate them.
b) equipment and other product contact surfaces should be cleaned by thorough washing after exposure to a pest control maintenance compound (i.e. after spraying with insecticide).

Guidance

Refer to Part 10 for procedures for handling, using and storing pest control maintenance compounds.

Insecticides that have residual activity or are dispensed as continuous aerosols should not be used in processing or storage areas in a way that could contaminate inputs, products or product contact surfaces.

11.4.4 Use of Pest Traps

(1) Pest traps (including rodent boxes, bait stations and electric insect traps) must be positioned so as to minimise contamination of inputs, products, packaging or containers.

(2) The location of pest traps must be identified on a site or building plan, or other suitable record.

Guidance

Bait stations should not be located inside any processing or material or product storage area.

(3) Insect traps, which include ultra-violet lamps, pheromone traps and any form of attractant device:

a) should be constructed so they catch and secure insects in a suitable drawer, tray or adhesive mat that facilitates the capture and removal of insects;
b) must not cause any air-borne contamination; and
c) must be sited so there is no contamination from insects falling on to exposed inputs, products, packaging, or product contact surfaces.

Guidance

Due to animal welfare restrictions, adhesive traps may only be used for insect traps. These may be suitable for use in processing areas.

11.4.5 Handling and Disposition of Contaminated Materials [AP Reg 70, PSP Notice C6.2]

(1) When there is evidence of contamination from pests affected:

a) product must be assessed to determine it suitability for consumption or for some other purpose;
b) product must be appropriately disposed;
c) product contact surfaces must be cleaned and sanitised prior to re-use; and

d) packaging that cannot be effectively cleaned and sanitised must not be used for packing any products and should be appropriately disposed of. [AP Reg 68]

11.5 Monitoring

[APA section 17, AP Regs 10, PSP Notice C1.12]

(1) The operator must regularly check ongoing compliance to documented procedures and the effectiveness of the pest control procedure.

(2) Monitoring must include regular monitoring of the premises for evidence of:

a) entry or infestation by pests; and
b) pest breeding sites; and
c) food sources for pests.

(3) Pest traps must be checked regularly and at a frequency appropriate to the nature of the device:

a) to ensure they are legibly identified and correctly located as indicated in the plan or record;
b) for evidence of pest activity (e.g. nibbled bait, bait missing, droppings); and
c) to check that the traps are in good working condition and for the presence of bait (where needed).

Guidance

Monitoring options include:

- daily visual checks of processing and product areas for any signs of pest activity, and for evidence that waste is properly managed;
- monthly checks on integrity of pest proofing (e.g. screens, seals); and
- monthly checks of pest traps or bait stations.

When determining monitoring frequency for bait stations and pest traps, operators should consider the type of traps used and the level of pest activity. Adhesive boards can often give a good indication of insect levels and should be changed often. If pest activity increases, monitoring frequency should increase and appropriate corrective actions taken.

11.6 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) These records must include:

a) monitoring carried out, problems identified and corrective action taken; and
b) details of the contracted pest control person or agency, if applicable.

Guidance

Another example of a record that could be used to demonstrate compliance are:

- the list of maintenance compounds used and held in the premises; and
- training records for suitably skilled persons.

Refer to Part 19 for record keeping requirements.

Part 12: Training and Competency of Personnel

12.1 Purpose and Scope

To ensure that all staff involved in the handling of seafood products are competent and skilled to perform their duties, and are aware of and comply with good hygiene practices and with operating procedures.

Guidance

Where MPI have set specific training or knowledge requirements in law, these are referred to as "competencies". If specific competencies have not been set, it is up to you to identify the skills needed to perform a task or role.

12.2 Mandatory Requirements

AP Reg 19 Identification of persons responsible for key tasks

A risk management programme must identify by position, or by name and position, the persons responsible for the following key tasks:

a) sign-off on documents that make up part of the programme before they are implemented:
b) verification by the operator of the programme:
c) corrective actions:
d) recalls:
e) monitoring at a critical control point:
f) any other key tasks that are specified as such in a supplementary notice.

AP Reg 20 Competency and skills of certain persons

(1) A risk management programme must identify in relation to the key tasks in regulation 19—

a) any competencies required by these regulations and supplementary notices; and
b) if no competency is required by these regulations or by supplementary notices, any skills the operator considers are necessary; and
c) how the required competencies or necessary skills will be achieved and maintained.

(2) The operator of a risk management programme must ensure that anyone carrying out a task that is not a key task and that could affect the suitability of animal material for processing or the fitness for intended purpose of animal product is suitably skilled to carry out the task.

PSP Notice H2.6 – Competency of personnel processing fish for human consumption

(1) During processing of fish, at least one person (or 2 or more people between them) on site who is involved with fish handling and hygiene activities must have evidence of completing at least one qualification or training (such as in-house training) in a competency, from each of the following Tables 11, 12, and 13.

Table 11: Handling competencies

Unit/training	Level	Credit	Unit title/training content
5331	2	7	Handle seafood product
15344	3	5	Demonstrate knowledge of handling, and handle bivalve molluscan shellfish product

31493	3	5	Demonstrate knowledge of handling practices, and product seafood product fit for its intended purpose
29090	3	5	Demonstrate knowledge of product safety practices and processes in a primary products food processing operation
training	N/A	N/A	Handling methods to maintain food safety, wholesomeness, and control of food safety risk factors

Table 12: Hygiene competencies

Unit/training	Level	Credit	Unit title/training content
5332	2	5	Demonstrate knowledge of and use hygienic work practices while working with seafood
28630	3	5	Apply hygiene and food safety requirements to own work area in a primary products food processing operation
training	N/A	N/A	Personal hygiene and hygienic work practices to prevent foodborne diseases in seafood products

Table 13: General competencies

Unit/training	Level	Credit	Unit title/training content
6212	3	10	Demonstrate knowledge of contamination, and clean and sanitise a seafood operation
31496	2	3	Demonstrate knowledge of cleaning and sanitation and clean and sanitise a seafood operation work area
28633	3	5	Demonstrate knowledge of cleaning and sanitation in a primary products food processing operation
training	N/A	N/A	Contamination in a seafood processing premises, and cleaning and sanitising of facilities and equipment

(2) Fish handling and hygiene activities during processing are key tasks for the purposes of Regulations 19 to 21.

Guidance
The competencies in H2.6 of the PSP Notice should also apply to BMS processors.

PSP Notice L1.3 – Competencies of supervisors

(1) Processors engaged in the thermal processing of low-acid commercially sterilised products must ensure that the processing is supervised by a person who has at least one of the following qualifications:

a) for canning:

i) Principles of Thermal Process Control, Acidification and Container Closure Evaluation, Massey University, New Zealand;
ii) Retort supervisors certification course, DWC Food Tech Pty Ltd, Australia:
iii) New Zealand Retort Supervisors and Process Control School, Food Processing Specialists Pty, Australia; and

b) for aseptic processing and packaging operations, Principles of Thermal Process Control, Acidification and Container Closure Evaluation, Massey University, New Zealand.

(2) The supervision of thermal processing of low-acid commercial sterilisation is a key task, for the purposes of Regulations 19 to 21.

PSP Notice L1.4 – Development and signing-off (LACF)

(1) Processors engaged in the thermal processing of low-acid commercially sterilised products must ensure that the processes:

a) are developed and validated by or under the supervision of a person who has at least one of the qualifications, (as appropriate to the nature of the operation) specified in subclause (2); and
b) are checked and signed off by a person who is independent of the development and validation process, and has at least one of the qualifications (as appropriate to the nature of the operation) specified in subclause (2).

(2) The competencies required under subclause (1) are:

a) for canning:

i) Qualified Cannery Persons (Thermal Processing) Course, Western Sydney University (Hawkesbury), Australia:
ii) Approved Persons Course for thermally processed low-acid foods, DWC Food Tech Pty Ltd and CSIRO, Australia:
iii) Introduction to the Fundamentals of Thermal Process Evaluation, Massey University, Palmerston North, New Zealand; and

b) for aseptic processing and packaging operations, Approved Persons Course for UHT Processing and Aseptic Packaging, DWC Food Tech Pty Ltd, Australia.

PSP Notice L3.6 – Competencies of personnel (*Listeria*) refer to section 27 for specific competency requirements.

PSP Notice H3.24 – Competency requirements (Depuration) refer to section 22 for specific competency requirements.

12.3 Procedures

[APA section 17, AP Reg 10, 19, 20]

12.3.1 Competencies

(1) The name or name and position of staff performing key tasks, and the competencies or skills required to carry out those task must be written into the RMP. To do this you must:

a) identify the tasks which are considered "key tasks";
b) document the required competencies or skills (training, knowledge or experience) needed;
c) how they will be achieved and maintained; and
d) keep training records for each staff member [AP Reg 20].

(2) The day-to-day manager or person authorising all or part of the RMP must have the necessary knowledge, experience, and skills in relation to the RMP.

Guidance

It is your responsibility to ensure that anyone carrying out a task that could affect the suitability of animal material or the fitness for intended purpose of animal product is suitably skilled to carry out the task. An example of the skills and knowledge that are appropriate to the day-to-day manager are:

(a) knowledge of the food safety matters relevant to products included in the RMP;
(b) knowledge of the hygienic procedures and practices documented in this Code;

(c) knowledge of regulatory requirements, including responsibilities, related to the RMP; and
(d) ability to liaise and communicate effectively with personnel, the recogised verifier and MPI.

Ideally, staff performing key tasks should be employed in a higher operational role within a premises , or have had relevant previous experience.

Further examples of the skills of responsible persons are in Table 6 of the RMP Manual.

Skills for people responsible for hazard identification and analysis
Persons responsible for the development or review of a hazard identification and analysis should should have at least one of the following qualifications or training-:

- unit standard 17996 'Develop, confirm and review a hazard identification and analysis and CCP determination for a seafood product'; or
- a higher level HACCP unit standard (such as one of those described below for development or review of a HACCP plan); or
- other training or competency equivalent.

Skills for people responsible for HACCP plans
Persons responsible for the development or review of a HACCP Plan should have at least one of the following qualifications or training-:

- unit standard 12316 'Coordinate development, and discuss implementation and verification of a HACCP plan for a seafood processing operation'; or
- unit standard 19514 'Explain the application of HACCP principles'; or
- unit standard 12626 'Coordinate the development and/or verification of a HACCP plan or application for a meat processing operation'; or
- 28265 'Develop, implement and review a HACCP application for a food processing operation'; or
- other training or competency equivalent.

Skills for people responsible for the review of HACCP plan records
Persons responsible for the review of HACCP plan records (the HACCP supervisor) should have at least one of the following qualifications or training:

- unit standard 12315 'Describe and supervise a seafood operation under a Hazard Analysis Critical Control Point system'; or
- 28264 'Demonstrate understanding of a HACCP application in a food processing operation'; or
- a higher level HACCP unit standard (such as one of those described above); or
- other training or competency equivalent.

Exporters should check the OMARs for the destination country to determine if there are any specific HACCP competency requirements. For example, if exporting to the US, the HACCP competencies above are mandatory.

For further information on training available for the seafood industry see: Primary ITO, the New Zealand Qualifications Authority and Te Pūkenga (external websites).

12.3.2 Training Procedures

(1) The operator must document a training procedure for product handlers and associated staff that includes skills required for key tasks, skills maintenance, monitoring, corrective action and records.

(2) The operator should provide regular training for all product handlers in safe food handling, personal hygiene and sanitary practices to ensure they maintain the skills- required for their tasks.

(3) Training procedures should be reviewed at least annually to ensure that staff training remains up-to-date and effective, and to identify any need for new or refresher training.

Guidance

Induction programmes
Induction programmes should be provided for all staff (including temporary staff and contractors) involved in or associated with the handling of products, informing them of health requirements, personal hygiene and hygienic work practices and other requirements associated with the tasks they are to perform.

Regular training
Training against written instructions or procedures for specific tasks, including machine operation and monitoring of product and process parameters is an effective way to train staff. They should be supervised until they can perform the tasks on their own.

On-going training may also take the form of regular staff meetings, in-house on-job training or external training courses. Staff should be involved in some form of on-going training every 3-4 months.

Where appropriate, clear instructions on hygienic practices (e.g. hand washing, use of protective clothing) and on operational tasks should be posted in the premises to re-enforce the procedures.

12.3.3 Competencies if producing certain ready-to-eat seafood products [PSP Notice L3.6]

(1) Operators processing certain RTE products must ensure that the people described PSP Notice L3.6 have the required skills and knowledge for the role.

Guidance

Part L3 of the PSP Notice requires procedures for *Listeria* management. It applies to operators processing chilled RTE animal products, with some exclusions based on the characteristics of the product e.g. its shelf life, pH and/or water activity. Also see Part 27 Management of *Listeria monocytogenes* in RTE Seafood Products.

12.4 Monitoring

[APA section 17, AP Regs 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

Guidance

Monitoring options include:
- using personal hygiene checks to confirm that personal hygiene training is effective; and
- checks to confirm that staff who carry out key tasks (e.g. those responsible for monitoring and corrective action) are appropriately skilled and are performing those tasks correctly; and
- confirming that all staff or positions performing roles with specified competencies, have those competencies.

12.5 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) These records must include:

a) monitoring carried out, problems identified and corrective action taken; and
b) training records for persons involved in key tasks.

Guidance

Examples of other documents that could be used to demonstrate compliance are:

- training materials; and
- training records including:
  - the training undertaken;
  - copies of training certificates; and
  - dates when training occurred;
- who provided the training including a list of any external training providers.

Refer to Part 19 for record keeping requirements.

Part 13: Ingredients, Additives and Other Inputs

13.1 Purpose and Scope

To ensure that additives, ingredients and other process inputs meet relevant regulatory requirements, and are received, handled and stored in a manner that minimises contamination and deterioration. This Part does not apply to raw seafood used as an ingredient.

13.2 Mandatory Requirements

AP Reg 56 Operator must ensure suitability of animal material, animal product, and other inputs

(1) The operator of a risk management programme must ensure that animal material, animal product, and other inputs that the operator produces or receives from a supplier are suitable for processing.

(2) The operator of a risk management programme must—

a) manage risk factors in relation to inputs; and
b) take actions (including application of processing steps) to control those risk factors.

Australia New Zealand Food Standards Code, Part 1.3, Substances added to or present in food

(1) This Standard regulates the use of food additives, vitamins and minerals and processing aids in the production and processing of food. A food additive may only be added to food where expressly permitted in this standard. Additives can only be added to food in order to achieve an identified technological function according to Good Operating Practice.

13.3 Procedures

[APA section 17, AP Reg 10, 56]

13.3.1 Purchase and Receiving

(1) Procedures must be documented and implemented for the sourcing of incoming goods (inputs) to confirm that regulatory requirements are met.

Guidance

The procedures should address:

- sourcing of inputs (e.g. ingredients, additives and processing aids) from reputable suppliers with reliable traceability procedures;
- consideration of allergens;
- written specifications that have been agreed between the operator and the supplier, including any regulatory requirements to be met and acceptance criteria;
- inspection to confirm that:
  - the inputs comply with the agreed specifications; and
  - sufficient information is provided on labels and/or in accompanying documentation for their proper identification, storage and use.
- the provision of certificates of analysis or supplier guarantees, when required; and
- actions to be taken when inputs do not meet agreed specifications.

(2) All inputs should be:

a) checked for the presence of visible contaminants, damage and other relevant characteristics (e.g. temperature); and
b) moved in a way that minimises any contamination or damage (e.g. forklift damage).

(3) Inputs with damaged packaging should be handled to minimise their:

a) exposure or spillage (e.g. they can be wrapped and sealed); and
b) contamination or deterioration.

13.3.2 Storage

(1) Inputs should be:

a) stored separately in an appropriate area in a way that minimises contamination or deterioration (e.g. shelf, cupboard, chiller, freezer or room);
b) adequately protected from chemicals, other inputs or products that may cause taint; and
c) stored on racks, shelves or pallets to ensure no contact with the floor.

(2) The method of storage should comply with label instructions or as provided by the supplier (e.g. some items may require clean, dry storage, others may require refrigeration).

(3) Inputs should be kept in closed containers when not in use.

(4) All containers of inputs must be clearly identified or labelled so that traceability can be maintained.

(5) Storage areas must be kept clean and tidy.

13.3.3 Use

(1) Inputs should be checked before use to ensure they are within their shelf life requirements.

(2) Ideally, outer pallet wrapping should be removed before inputs enter the processing area. However, if this is not practical wrapping can be removed in the processing area provided effective controls are in place to minimise any risk of contamination to surrounding inputs, products or product contact materials.

(3) Inputs:

a) must be permitted for use in the product and at levels that comply with any limits in the FSC; and
b) should be used in accordance with manufacturers' instructions.

Guidance

Exporters should check the OMARs for the destination country for any specific country requirements or restrictions on inputs.

13.4 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

Guidance

Monitoring options include:

- checks of all inputs on arrival;
- checks during processing to ensure that inputs are as specified and used correctly; and
- weekly checks to confirm that inputs are clearly identified, stored correctly and traceability is maintained.

13.5 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) These records must include monitoring carried out, problems identified and corrective action taken.

Guidance

Examples of other records that could be used to demonstrate compliance are:

- register of inputs (including additives and other ingredients);
- register of suppliers;
- incoming goods delivery documentation e.g. supplier specifications, statements/guarantees;
- any supplier audit reports;
- daily & weekly check sheets; and
- training records for suitably skilled persons.

Refer to Part 19 for record keeping requirements.

Part 14: Allergen Management

14.1 Purpose and Scope

To ensure that seafood products that contain allergens are appropriately managed and labelled so that they don't cause harm to consumers.

This Part applies to operators that process or handle products that contain inputs requiring a declaration for allergens under the FSC. Operators who process finfish, molluscs or crustaceans only and use no other additives or ingredients, are not expected to have specific procedures for managing allergens. However, management is expected if you are processing allergenic and non-allergenic products.

Allergenic substances under Standard 1.2.3 of the FSC include:

- added sulphites in concentrations of 10 mg/kg or more;
- cereals containing gluten and their products, i.e. wheat, rye, barley, oats, spelt and their hybridised strains (with some exceptions, see the FSC);
- crustacea and their products;
- fish and fish products (with an exception for beer and wine);
- mollusc and mollusc products;
- egg and egg products;
- milk and milk products (other than alcohol distilled from whey);
- peanuts and peanut products;
- soybeans and soybean products (with exceptions);
- sesame seeds and sesame seed products;
- tree nuts and tree nut products; and
- lupin and lupin products.

Guidance
More detailed information on allergen management and labelling is available from:

- the MPI website;
- the Allergen Bureau website; and
- the Code of practice on food allergen management for food business operators, CXC 80-2020 (Adopted in 2020).

Exporters should also consider if there are any additional allergens that need to be addressed for the countries they export to.

14.2 Mandatory Requirements

Australia New Zealand Food Standards Code — Standard 1.2.3 — Information requirements — warning statements, advisory statements and declarations.

14.3 Procedures

[APA section 17, AP Reg 42 & 43]

14.3.1 General

(1) Procedures must be documented and implemented, where necessary, based on the products and operations within the premises, to manage and label allergenic products that are regulated under the FSC. [AP Reg 56 & 58]

(2) Potential sources or causes of unintended exposure or contact of product or surfaces with allergens must be identified and controls established.

(3) If allergen management is a key task in the RMP, skills must be specified for those tasks. [AP Reg 20]. (Also see section 12.3.2)

(4) Key staff (including product handlers) should be trained in allergen management and the consequences of unintentional consumption of allergens by allergic consumers, as appropriate to their role.

Guidance

A HACCP approach is recommended for the systematic identification of allergens for products and processes, and to implement appropriate control measures. The product and process should be assessed starting with sourcing of inputs and at every step of the process through to labelling and packing.

Unintended exposure or contamination may result from:

- using the wrong formulation;
- inadequate separation of materials (e.g. fish and shellfish if appropriate), equipment and processes;
- changes to product scheduling;
- rework;
- insufficient or ineffective cleaning and sanitation of equipment, containers and other product contact surfaces;
- contamination from air-borne allergens; or
- staff practices that could lead to incidental contamination.

14.3.2 Inputs

(1) Accurate allergen information must be obtained from suppliers for all inputs. [AP Reg 56]

Guidance

Suppliers should provide allergen information about each input, identifying any allergens, products that are derived from allergenic materials, or those that have a high likelihood of cross contact with allergenic substances. For example, premixes of fillers or binders may contain milk or egg powder.

Also see Part 13 for more information about purchasing and handling ingredients, additives and processing aids.

(2) Inputs must be handled and stored to prevent cross-contamination between inputs of different allergen status. [AP Reg 56, 58]

14.3.3 Formulation

(1) Formulations must identify all inputs, including compound ingredients, substitute ingredients, additives and processing aids, and any rework. [AP Reg 9]

(2) The person responsible for formulation development must assess any change in an input on the allergen status of the product, and ensure that any changes in its management and labelling are made before a new formulation is put into production.

14.3.4 Processing

(1) Processing lines for products with different allergen status should be physically separated, separated by time or separated by distance, as appropriate to the type and size of the operation, based on an assessment of the potential for product contamination and risk to human health.

Guidance

Ideally, processors should use dedicated processing areas and equipment or have separate processing lines for products of different allergen status. If separation is achieved by time and non-allergenic products should be processed first when the equipment is clean. Products of different allergen status can also be done on different days. The operator should have evidence that procedures are effective to prevent cross contamination.

(2) If rework is to occur, this must be carried out with full knowledge of the allergen status of both the rework and the product in which it is to be used, to prevent cross-contamination. [AP Reg 9 & 56]

14.3.5 Cleaning

Guidance

In addition to the procedures in Part 7, the cleaning procedure should include:
(a) cleaning of all surfaces, equipment, utensils, clothing and hands of product handlers that may have come in contact with products that contain allergens;
(b) cleaning of spills;
(c) cleaning of hidden or static areas; and
(d) dismantling of equipment to remove residues.

(1) Facilities, equipment and utensils should be cleaned and protective clothing changed:

a) before processing a non-allergenic product, if the previous product contained an allergen; and
b) between processing products containing different allergens.

(2) A pre-operational check should be performed after cleaning when swapping between allergenic and non-allergenic products.

(3) Operators should validate the cleaning procedure in relation to allergens to ensure that it is effective.

Guidance

Cleaning procedures should be verified where feasible, to demonstrate that if followed allergens are effectively removed. Equipment should be inspected after each cleaning to determine whether it is visibly clean. Periodic tests can be carried out to detect food residues that remain on surfaces after cleaning. Where feasible, these tests should include using an allergen-specific test kit (if available). (Codex CXC 80-2020)

14.3.6 Labelling

(1) Labelling must comply with Standard 1.2.3 of the FSC, which requires the mandatory declaration of certain substances and their products.

Guidance

The FSC requires a separate declaration for crustaceans, molluscs or fish if they are in the product. A separate allergen warning is not required if the name of the food is the allergen.

MPI has developed a guide to assist with the labelling requirements in the FCS:

- Allergen labelling – Knowing whats in your food and how to label it

Also see the FSANZ Food Labelling Webpage for labelling guidance.

14.4 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with, the documented procedures.

14.5 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) These records must include:

a) monitoring carried out, problems identified and corrective action taken; and
b) training records.

(3) Other records that should be kept include:

a) cleaning validation reports;
b) cleaning records;
c) ingredient information sheets and supplier agreements;
d) formulations; and
e) labelling checksheets and records of labelling decisions.

Guidance

An examples of other records that could be used to demonstrate compliance is training records for suitably skilled persons.

Refer to Part 19 for record keeping requirements.

Part 15: Packaging and Containers

15.1 Purpose and Scope

To ensure that product contact materials, such as fish bins and containers, and packaging such as plastic bags/liners, etc., used for edible seafood products, are fit for their intended purpose.

This Part does not apply to packaging applied to bivalve molluscan shellfish while subject to the BMS RCS.

15.2 Sources of Hazards

Source	Examples of hazards
Product contact packaging (plastic bags, wraps, liners, and may include cardboard cartons)	Chemical residues (e.g. inks) Physical hazards such as foreign material (e.g. cardboard slivers, pieces of plastic, etc.)
Reusable product containers (e.g. plastic bins, tubs)	Bacterial pathogens Chemical residues (e.g. cleaning chemicals) Physical hazards such as foreign material (e.g. pieces of plastic from damaged containers, etc.)

15.3 Mandatory Requirements

AP Reg 56 Operator must ensure suitability of animal material, animal product, and other inputs

(1) The operator of a risk management programme must ensure that animal material, animal product, and other inputs that the operator produces or receives from a supplier are suitable for processing.

(2) The operator of a risk management programme must—

a) manage risk factors in relation to inputs; and
b) take actions (including application of processing steps) to control those risk factors.

AP Reg 68 Packaging requirements for animal material and animal product

The operator of a risk management programme must ensure that any packaging (including reusable packaging and inner and outer packaging of any kind) used for animal material or animal product is designed, made, stored, and used in a manner that—

a) maintains the suitability of the animal material for processing; and
b) maintains the fitness for intended purpose of the animal product; and
c) minimises contamination and deterioration of the animal material or animal product.

PSP Notice C3.5 – Standards for packaging

(1) Operators of RMPs must have procedures to ensure:

a) the integrity, cleanliness, and freedom from contamination of packaging; and
b) that the packaging is not a source of contamination.

PSP Notice E1.2 – Dealing with contaminated product and damaged packaging [relevant clauses]

(2) If the packaging of animal material or animal product is damaged, and the damage has the potential to adversely affect animal material or animal product:

a) the damage must be rectified, while handling the animal material or animal product, in a manner that minimises deterioration and contamination; or
b) the animal material or animal product and its packaging must be disposed of appropriately.

Guidance

For further guidance on dealing with damaged packaging refer to the Damaged Packaging: Prevention and Management, A Guideline for the Seafood Industry. This is available on the Seafood Standards Council website.

15.4 Procedures

[APA section 17, AP Reg 43, 56, 68, PSP Notice C3.5]

15.4.1 Receiving and Storage

Guidance

You are responsible for ensuring that packaging is safe and suitable for the purpose for which it is being used, and complies with the legislation.

(1) The suitability for use of packaging should be based on information provided by your packaging supplier or an analysis of hazards and other risk factors from the packaging.

Guidance

Compliance with recognised international food standards such as those of the European Union (EU) or the United States Food and Drug Administration (FDA) would be reasonable evidence that materials are suitable for food use. For example compliance with:

- the requirements specified in the current US Code of Federal Regulations, Title 21, Parts 170-199, which applies equally to coatings and linings and cartons where these are the direct product contact surface;
- the requirements specified in the current "Australian Standard: Plastics materials for food contact use", AS2070-1999.

If you are using these standards as evidence, the section or standard with which the packaging complies should be documented in the RMP. This may be in the form of a written guarantee, letter or form from the supplier.

Exporters should check the OMARs for the destination country for any specific country requirements or restrictions on inputs.

(2) Procedures must be documented and implemented for the sourcing and management of packaging to confirm that regulatory requirements are met.

(3) All packaging and product contact containers should be checked on receipt to ensure they are received in a condition that is fit for purpose.

(4) Once accepted into the premises, all packaging and product contact containers must be handled to minimise contamination and deterioration.

(5) Containers and packaging held in a warehouse-type store should be securely wrapped and stored off the floor (e.g. on pallets) to minimise contamination.

15.4.2 Use

(1) Packaging and containers must be clean and undamaged at the time of use.

(2) Containers and packaging should be unwrapped only in a support area or processing area. After unwrapping, containers and packaging may be stored, handled or transported only in a support area or processing area. Refer to Part 3 for information on the design and construction of such areas.

(3) Only containers or packaging required for immediate use (e.g. for that shift or batch) may be held in any area where product is processed or packaged.

Guidance

Ideally, outer pallet wrapping should be removed before entering the processing area. However, if this is not practical, wrapping can be removed in the processing area provided effective controls are in place to minimise any risk of contamination to surrounding products or product contact materials.

Unused containers and packaging may be returned to a warehouse-type store providing the packaging is re-wrapped to minimise contamination.

(4) All packaging must be removed from the processing area or adequately protected before any cleaning and sanitising operations are carried out.

(5) Operators must ensure that opened cartons are re-closed and covered during storage to prevent contamination.

(6) Wet plastic packaging should not be returned to the packaging store.

Guidance

Made-up cartons may be:
- left in the processing room during cleaning and sanitation as long as they are adequately protected; or
- brought into the processing room once cleaning and sanitation is complete, ready for the next processing shift.

Made up cartons may be protected from contamination by covering the top layer of cartons or inverting the topmost carton.

(7) Re-usable containers (for transporting or storing product) must be:

a) clean before use;
b) cleaned and sanitised at a frequency specified in the cleaning and sanitation procedure; and
c) undamaged and replaced if they are not fit for use.

Guidance

The frequency of cleaning and sanitising reusable containers (e.g. fish bins) should take into account the areas in which the containers are used and whether product comes into contact with the container.

(8) Re-usable containers that have been cleaned must be protected from contamination or recleaned before use.

15.5 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

Guidance

Monitoring could include:

- checks on arrival to confirm that packaging has not been damaged in transit, and shows no visual sign of contamination;
- checks that the documentation confirms that the packaging meets the compositional requirements;
- checks before use to confirm that packaging is clean and suitable for use; and
- weekly checks to confirm proper packaging storage.

15.6 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) These records must include monitoring carried out, problems identified and corrective action taken.

Guidance

Examples of other records that could be used to demonstrate compliance are:

- register of packaging and/or suppliers;
- supplier statements/guarantees for packaging and containers;
- daily & weekly check sheets; and
- training records for suitably skilled persons.

Refer to Part 19: for record keeping requirements.

Part 16: Traceability

16.1 Purpose and Scope

To ensure that procedures are in place to manage traceability of seafood products.

16.2 Mandatory Requirements

AP Reg 103 Traceability procedures [relevant clauses]

(1) An operator that this Part applies to must have in place and implement traceability procedures that enable the operator—

a) to trace animal material and animal product—

i) from the supplier to the operator; and
ii) from the operator to the next recipient in the supply chain (other than the final consumer); and

b) to identify and locate animal material and animal product while it is under the control of the business.

(2) The operator must ensure that the information required under subclause (1) or by a supplementary notice referred to in subclause (4) is accurate.

(3) The operator must ensure that the information required under subclause (1) is also sufficient to allow an effective recall to be carried out.

AP Reg 104 Providing traceability information on request

When requested to do so by the Director-General or an animal product officer, an operator that this Part applies to must provide information about the matters in regulation 103(1) or required by a supplementary notice—

a) in a readily accessible format; and
b) within 24 hours after the request, or within any reasonable shorter period specified by the Director-General or animal product officer.

PSP Notice C3.3 – Transferring between sites

(1) Animal material or animal product need not comply with clause C3.2 if it is transferred between sites within New Zealand and:

a) the sites are sites of a single operator or subsidiaries of a single operator; and
b) that operator has procedures that ensure traceability is maintained.

PSP Notice C4.2 – Storing animal material and animal product [relevant clauses]

(1) All animal material and animal product must be stored in a manner that:

a) minimises damage to its packaging; and
b) enables effective cleaning of the store; and
c) facilitates effective traceability and inventory control.

PSP Notice C6.3 – Managing non-conforming animal material or animal product [relevant clauses]

Procedures for managing non-conforming animal material or animal product must ensure the traceability of the non-conforming animal material or animal product.

PSP Notice H1.2 – Documents required for supply [relevant clauses]

(2) Suppliers of farmed fish must ensure that fish consignments are identified to enable traceability to the supplier and the supplier declaration or periodic declaration.

16.3 Procedures

[APA section 17, AP Reg 103]

(1) Procedures must be documented and implemented for the identification and tracking of all inputs (including rework but not packaging) and products, including imported products and be sufficient to allow for an effective recall.

(2) The tracking system must allow for inputs and finished products to be traced:

a) back to the supplier of the input; and
b) to the next person or company that the product is transferred to for further processing, packing, storage, distribution or sale.

Guidance

It is optional whether individual input batches (e.g. ingredients or additives) can be traced to specific final product batches. If individual input batches cannot be traced, more product is likely to need to be withdrawn or recalled if there is a problem.

(3) The traceability procedures must ensure the traceability of all non-complying materials and products.

(4) All outgoing products must be clearly identified and accompanied by appropriate documentation. [FSC, AP Reg 66] (Also see Part 17).

Guidance

Table 5 provides an example of a supply chain, as inputs are received and processed and product is dispatched, and the types of traceability records that may be kept.

Table 5: Supply chain step and examples of traceability records

Step	Record Type	Traceability records	Description
Product received from catching vessel	Reception records	Reception check sheets Unloading documentation	Record date, supplier details e.g. vessel name, fish species, and quantity
Product received from other premises in NZ – fresh or frozen		Purchasing records	Details of product received
Reception, weighing & grading	Processing records	Reception check sheets, delivery documents	Date received, weight, species
		Unloading dockets Weigh sheets	
Processing		Formulations, batch record sheets (including rework), production records	Production lot ID, pack date, amount of product

Frozen storage	Cold store inventory	Store records	Product ID, amount of product
Dispatch	Dispatch records	Sales records	Date, customer, product ID, pack date, amount of product

For further guidance about traceability, refer to "Traceability: A Guideline for the Seafood Industry", on the Seafood Standards Council website.

For further detail about exporting seafood products, refer to the:
- Official Assurance Specification and specifically the export requirements for inventory records and transport conditions etc.; and
- OMARS for the destination markets. Some OMARs require the separation of products on the basis of country eligibility.

16.4 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

Guidance

The operator should check, at least annually, that the documented procedures are appropriate.

16.5 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) These records must include:

a) monitoring carried out, problems identified and corrective action taken;
b) traceabilty records (either electronic or hard copy);
c) supplier contact details; and
d) details of the person or company to whom the products are supplied.

(3) These records should include:

a) inputs including rework, batch numbers, quantities;
b) type, formulation, processing dates and quantities of finished products, batch numbers, any repacking; and
c) load in and load out checks, despatch dates.

Guidance

An examples of other records that could be used to demonstrate compliance is training records for suitably skilled persons.

Refer to Part 19 for record keeping requirements.

Part 17: Labelling

17.1 Purpose and Scope

To ensure that labelling on seafood products meets the relevant labelling requirements under the APA and the FSC.

17.2 Mandatory Requirements

AP Reg 66 Labelling and identification requirements

(1) The operator of a risk management programme must ensure that any labelling or identification clearly relates to the animal material or animal product to which it applies.

(2) The operator of a risk management programme must ensure that any relevant labelling and identification of animal material or animal product is appropriately and accurately amended if the animal material or animal product is no longer fit for its original intended purpose.

AP Reg 246 Animal material or animal product must not be associated with false or misleading representations

The operator of an animal product business must ensure that animal material or animal product, or its labelling, identification, or packaging, is not associated with a false or misleading representation of any kind, including about—

a) the unique location identifier of the processing premises:
b) the lot identifier (if applicable) of the product or product identification:
c) the fitness of the material or product for its intended purpose:
d) the nature and condition of the material or product:
e) the origin of the material or product:
f) the composition of the material or product:
g) the ingredients of the material or product:
h) the proportions of ingredients or other constituents of the material or product:
i) the type of processing applied to the material or product:
j) the net contents of the material or product.

PSP Notice C3.2 – Labelling content [relevant clauses]

(1) This clause applies only to:

a) labelling on transportation outers; and
b) labelling on bulk transportation units (i.e., those carrying unpackaged animal material or animal product); and
c) any accompanying documentation (which may be in electronic form) that replaces or supplements labelling on transportation outers or bulk transportation units.

(2) If labelling is required on transportation outers or bulk transportation units, the labelling or accompanying documentation must comply with this clause as well as with any other specific requirements in this Notice.

(3) Labelling of animal material or animal product for human consumption must include the following:

a) the name or description of the material or product:
b) storage directions, where necessary to maintain suitability for processing of animal material or fitness for intended purpose of animal product:
c) lot identification, unless the lot identification is on the individual packages contained within a transportation outer:

d) information that identifies the premises where the most recent processing (other than mere storage or transport) was done.

(4) In addition to subclause (3), in the case of fish material or fish product for human consumption (other than fish oil or fish meal), labelling must also include the following:

a) the scientific name of the fish, as identified in Schedule 5: Scientific names of fish, unless the product contains mixed fish species:
b) in the case of imported fish, the scientific name on the documentation received with the incoming fish material or product:
c) in the case of shucked pāua that is intended for canning and is permitted to be held at temperatures not exceeding 6°C, that the pāua is for canning in New Zealand only.

PSP Notice C3.3 – Transferring between sites

(1) Animal material or animal product need not comply with clause C3.2 if it is transferred between sites within New Zealand and:

a) the sites are sites of a single operator or subsidiaries of a single operator; and
b) that operator has procedures that ensure traceability is maintained.

PSP Notice C3.4 – Labelling on reused or recycled packaging

(1) This clause applies to labelling on reused or recycled packaging used with animal material or animal product.

(2) If any of the original labelling on reused or recycled packaging would be false or misleading when used for new animal material or animal product, the labelling must be removed or defaced before leaving the processor's premises.

PSP Notice H3.10 – Labelling of BMS

(1) Containers of shellfish for human consumption must, before leaving the processing premises, be labelled with:

a) the growing area authority identifier as defined in the BMS RCS; and
b) the date of harvest; and
c) the type and quantity (number or weight) of shellfish.

(2) However, a lot number labelling system may be used to replace the requirements of subclause (1)(a) and (b) if adequate traceback to the specific harvest dates and harvest areas is provided in the RMP.

(3) If reshipping (the purchase and resale of shellfish without repacking) occurs:

a) the original labels on shucked shellfish and shellstock must be maintained on the product containers; and
b) labelling information must not be altered or removed, nor the product mixed with other shellfish, resorted or repackaged; and
c) the name of the processor responsible for reshipping must be added to the container.

(4) Note that this clause applies in addition to the requirements of clause C3.2.

Guidance

The New Zealand list of scientific names of fish as required by PSP Notice C3.2(4) is in Schedule 5 of the PSP Notice, and the Approved fish names are available on the MPI website.

Food Standards Code Part 1.2 Labelling and other information requirements

Standard 1.2.1 Requirements to have labels or otherwise provide information

Standard 1.2.2 Information requirements – food identification

Standard 1.2.3 Information requirements – warning statements, advisory statements and declarations (Also see Part 14 of this Operational Code - Allergens)

Standard 1.2.4 Information requirements – statement of ingredients

Standard 1.2.5 Information requirements – date marking of food for sale

Standard 1.2.6 Information requirements – directions for storage and use

Standard 1.2.7 Nutrition, health and related claims

Standard 1.2.8 Nutrition information requirements

Standard 1.2.10 Information requirements – characterising ingredients and components of food

Standard 1.2.11 Information requirements – country of origin labelling requirements

Guidance

FSANZ has a number of guidance documents to assist with compliance with the labelling requirements in the FSC.

Country of Origin

The Ministry of Business, Innovation and Employment has introduced requirements under the Consumers' Right to Know (Country of Origin of Food) Act 2018 for country of origin labelling on fish. **This** Act requires single ingredient fresh or frozen fish or seafood, that is no more than minimally processed; and is sold on the domestic market to have its country of origin identified. The Consumer Information Standards (Origin of Food) Regulations 2021 require the country of national fisheries jurisdiction (internal waters, territorial seas and EEZ) or the ocean from which the finfish or shellfish were harvested or taken, to be disclosed.

For further information, refer to the guidance developed by the Commerce Commission.

17.3 Procedures

[APA section 17, AP Reg 43, 66, 246, PSP Notice C3.2-C3.4, H3.10]

(1) Procedures must be developed and implemented for labelling products to ensure that all information printed on a label or on packaging is accurate, and that the correct label is applied to the product.

Guidance

Labelling procedures should cover the identification, storage, inventory and use of labels, and disposing of obsolete or incorrect labels.

Exporting
For exported seafood products, every container must be labelled with any information required by the destination country. This may include a requirement for the label to be in the language commonly used in that country.

The requirements for foreign language translations are contained in the country specific OMARs (such as the EU OMAR) and the Animal Products (Fish Export Processing Requirements) Notice 2011 (FEP Notice).

The person confirming the translation needs to be independent of:
- the commercial client, to meet the FEP Notice; and
- both the operator and the commercial client, to meet the EU OMAR.

The Seafood Standards Council (SSC) created a data sheet of confirmed EU language seafood translations. The data sheet is maintained by the SSC and is available on the EU OMAR web page under 'Seafood Industry Certified Translations'.

Processors also need to be aware of the country of origin labelling requirements if exporting to Australia.

For further information on labelling requirements for overseas countries see the MPI website: Exporting.

(2) Labelling on containers of products must not contain any false or misleading statements, words, pictures or marks.

(3) Labelling is not required for:

a) shipping containers; or
b) an interior wrapper that is intended to facilitate packing and is not intended to serve as the sole container of the contents of a package; or
c) any transparent wrapping material that has no label and encloses another container.

17.4 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

Guidance

Monitoring options include:
- daily labelling checks on specified products; and
- checks on new labels at the design phase to ensure they are accurate, comply with legislation and are not misleading.

17.5 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) These records must include monitoring carried out, problems identified and corrective action taken.

Guidance

Examples of other records that could be used to demonstrate compliance are:

- copies of labels that have been checked and comply with requirements;
- label checklists;
- training records for suitably skilled persons; and
- daily/weekly checks.

Refer to Part 19 for record keeping requirements.

Part 18: Operator Verification and Notifications

18.1 Purpose and Scope

To verify compliance with documented procedures and to confirm that they are appropriate and effective by ensuring that operator verification, including internal audits, are undertaken at the required frequencies.

To ensure that notification requirements are met by the operator.

18.2 Mandatory Requirements

AP Reg 22 Verification by operator of risk management programme

(1) A risk management programme must set out procedures for verification of the programme by the operator of the risk management programme.

(2) The procedures must—

a) specify the activities to be performed by the operator in relation to verification; and
b) specify the activities' frequency; and
c) specify the actions that must be taken when verification shows that all or part of the programme is not effective; and
d) specify the matters that must be recorded or reported; and
e) include a periodic review of the whole risk management programme.

(3) An operator must comply with any detailed requirements specified in a supplementary notice in relation to verification by the operator.

AP Reg 25 Procedure for meeting reporting requirements

A risk management programme must set out a procedure for meeting reporting requirements under the Act.

AP Reg 36 Reporting to verifier or verifying agency [relevant clauses]

(1) The operator of a risk management programme must notify the verifier or verifying agency in writing and without unnecessary delay if—

a) the following occurs:

i) anything within the physical boundaries of the programme is used for additional purposes or by persons not covered by the programme; and
ii) the programme has not adequately considered relevant hazards or other risk factors relating to that use; or

b) there is significant concern about fitness for intended purpose of any animal material or animal product; or
c) there has been a critical non-compliance by the operator; or
d) the operator of the risk management programme no longer considers the programme to be effective; or
e) the premises identified as being used by the programme are not, or no longer, suitable for use; or
f) any loss of control that occurs is due to unforeseen circumstances and adversely affects the suitability of animal material for processing or the fitness for intended purpose of animal product.

(2) Information that must be provided under subclause (1) must be provided in an easily accessible form.

AP Reg 37 Notifying Director-General

(1) The operator of a risk management programme must notify the Director-General of any emerging, new, or exotic biological hazard or new chemical hazard in relation to the programme as soon as practicable after its discovery.

(2) The operator must notify the Director-General in writing, without unnecessary delay, of any change to the position, or name and position, of the person responsible for the day-to-day management of the programme.

AP Reg 38 Operator of risk management programme must report certain information to Director-General

The operator of a risk management programme must report to the Director-General or the operator's verifier or verifying agency if the operator has reasonable grounds to believe that information a supplier provides about animal material or animal product is materially false or misleading.

AP Reg 18 Corrective action procedures

(1) A risk management programme must set out corrective action procedures in relation to foreseen types of loss of control, for—

a) restoring control; and
b) identifying, managing, or disposing of affected animal material and animal product; and
c) preventing recurrence of a loss of control.

(2) A risk management programme must set out a general procedure for managing unforeseen types of loss of control for which no specific corrective action is set out in the programme under subclause (1).

(3) The procedure under subclause (2) must specify that the operator of the risk management programme must nominate an appropriate person—

a) to manage the action; and
b) to record the loss of control and corrective actions taken.

PSP Notice B1.1 – Operator verification procedures

(1) The procedures for operator verification to be included in an RMP (referred to in Regulation 22) must include procedures for the following:

a) regularly checking that all procedures for managing risk factors are appropriate, effective, and consistent with the regulatory requirements:
b) regularly checking that records are generated as required by the RMP and contain all required information to demonstrate implementation of the RMP:
c) regularly checking whether the RMP operator is operating in accordance with the RMP, including any validated parameters and procedures:
d) checking, after any significant amendment to the RMP has come into effect, that all parts of the RMP that may be affected by the amendment are effective and properly implemented.

18.3 Procedures

[APA section 17, AP Reg 22 & 24]

18.3.1 Scope and Frequency of Operator Verification Activities

(1) Operator verification procedures must be documented and implemented.

(2) The operator verification procedures must include:

a) the responsible person(s) or position(s) and any required competencies to complete the activities;

b) what and how the activities will be carried out;
c) the frequencies that are sufficient to ensure compliance with the RMP, including GOP and process control procedures, and to enable prompt identification and correction of any problems;
d) actions to be taken if deficiencies are identified, including the timeframes, considering the nature of the deficiency;
e) the need to consider and where appropriate implement preventative actions; and
f) the records to be kept. [PSP Notice B1.1 and B1.2]

Guidance

Operator verification is not routine monitoring, validation or external verification. Operator verification is the dedicated activities carried out by the operator to gather evidence to show that:

- the RMP continues to meet the requirements in the legislation (particularly if amendments have been made to the RMP or the legislation);
- the procedures within the RMP address all activities being carried out by the operator;
- the procedures are effective, resulting in material or product that is suitable for processing or fit for its intended purpose; and
- the RMP is being implemented as documented.

Operator verification includes reviewing procedures and records, reality checks, interviews, testing product, and looking at customer complaints. Table 6 provides examples of operator verification for cleaning and sanitation.

Table 6: Examples of operator verification for cleaning and sanitation

Activity	Frequency of checks
Checks to assess effectiveness when the procedure is first implemented or if a substantial change is made.	Initially, every time the procedure is carried out (e.g. over 1-2 weeks).
Microbiological tests to confirm that the procedure is effective.	Sample every day for at least a week to allow for normal variation. Resample if changes made or new equipment introduced; otherwise resample at least 6 monthly or annually. If using new maintenance compounds, facilities, or if trouble-shooting, daily for 7-14 days. Otherwise, consult an expert to determine frequency or need.
Assess the procedure as it is being carried out.	Periodically e.g. weekly. Review records weekly or 2 weekly. Frequency increased if ongoing problems until resolved.
Checks that maintenance compounds are: • approved, with the correct approval conditions; • appropriate for the job; • applied correctly and at the right strength prior to and, in some cases, during use (e.g. foot-baths or knife sanitisers); • left for the required time (if important); • at the correct temperature (if important); • doing its job, i.e. removing the grease and soil etc.; and • properly rinsed (where appropriate).	Weekly or monthly as part of procedure review.

Checks of product support areas (e.g. maintenance compound stores, packaging stores, dry stores, cold stores).	Weekly.

For detailed guidance about operator verification refer to "Operator Verification: A Guideline for the Seafood Industry" on the Seafood Standards Council website.

(3) A review of the complete RMP should be undertaken at least annually.

(4) The RMP must also be reviewed and where necessary amended when:

a) changes are made to the product, process or premises; or
b) the RMP or parts of it are not working effectively.

Guidance

Indications that the RMP or parts of it are not working effectively include:
- a series or trend of non-compliance or out of specification product test results;
- customer complaints;
- product recall; or
- failed external verification.

18.3.2 Non-compliances with the RMP

(1) If critical non-compliances or ongoing or recurring non-compliances occur, the operator must:

a) investigate to determine possible causes of non-compliance;
b) take appropriate corrective action to regain control and prevent recurrence of the problem within appropriate timeframes;
c) increase surveillance of the system; and
d) review the RMP (or the relevant GOP) and make necessary changes.

(2) Critical non-compliances must be reported to your recognised agency.

Guidance

Also see Part 26 Handling, Disposition and Recall of Non-conforming Product, for dealing with non-conforming product and other notification requirements (e.g. in the event of recall).

Refer to the definition of **critical non-compliance** for the types of issues that must be reported to your recognised agency.

18.3.3 Notification

(1) The day-to-day manager must contact MPI without delay to notify about any issues that arise that are identified in AP Reg 37.

(2) The day-to-day manager must notify the recognised verifying agency in writing (e.g. by email or letter), if any of the issues identified in AP Reg 36 arise.

Guidance

AP Reg 37 requires the notification of any emerging, new, or exotic biological hazards or new chemical hazards that come to the operator's attention. An emerging, new, or exotic biological or new chemical hazard can be thought of as something that is not in our hazard database, or that has not historically been seen in your product sector. RMP operators are usually best placed to identify any emerging, new or exotic

biological hazards or new chemical hazards and to notify them to MPI as soon as practicable after its discovery, so that appropriate actions can be taken.

Please notify such events to: animal.products@mpi.govt.nz with the subject line “Notification to MPI of emerging, new, or exotic biological hazard or chemical hazard”.

18.4 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

18.5 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) These records must include:

a) monitoring carried out, problems identified and corrective action taken; and
b) training records for persons involved in key tasks.

Guidance

Examples of other records that could be used to demonstrate compliance are:

- records of the results of non-compliance investigations;
- operator verification records;
- internal audit records;
- RMP review records; and
- copies of communication sent to MPI, the recognised verifying agency or recognised evaluator.

Refer to Part 19 for record keeping requirements.

Part 19: Document Control and Record Keeping

19.1 Purpose and Scope

To ensure that all RMP documents, including records, are managed under a document control system that meets the requirements of the APA.

19.2 Mandatory Requirements

AP Reg 23 Record keeping

(1) The risk management programme must set out a procedure for record keeping.

(2) The operator of a risk management programme must store records for whichever is the longer of 4 years or the shelf life of the animal material or animal product to which the records relate.

(3) The operator of a risk management programme must ensure that all records are legible and are stored—

a) in a manner that protects the records from damage, deterioration, or loss; and
b) in an easily accessible form.

AP Reg 24 Document control procedures

(1) A risk management programme must set out procedures for effective control of the documents that make up the risk management programme.

(2) Those procedures must include provisions specifying—

a) how significant and minor amendments will be made to the programme; and
b) how amendments or the nature of the amendments will be identified or described; and
c) how documents will be authorised before they are implemented; and
d) how the programme will be updated with amendments, including updating the date or version of any documents.

(3) A risk management programme must identify all the documents that make up the programme.

(4) A multi-business risk management programme must identify which documents relate to which business.

(5) All the documents that make up the programme must be legible, and dated or marked to identify the programme's version.

(6) One of the following people must authorise each document before it is implemented into the risk management programme:

a) the operator of the programme:
b) the day-to-day manager of the programme:
c) a person nominated to do so in the document control procedures.

AP Reg 25 Procedure for meeting reporting requirements

A risk management programme must set out a procedure for meeting reporting requirements under the Act.

AP Reg 31 Control of risk management programme documents

(1) The operator of a risk management programme must have an up-to-date version of the risk management programme.

(2) Every document, or part of a document, that makes up a risk management programme must be accessible to any person with responsibilities under the programme.

AP Reg 32 Archived documents

(1) The operator of a risk management programme must keep a copy of every document that has formed part of a risk management programme but has since been—

a) replaced by a more recent version; or
b) taken out of the programme.

(2) The operator must keep the copy for the longer of the following:

a) 4 years:
b) the shelf life of the animal material or animal product to which the risk management programme relates.

(3) The operator must keep the copy in a manner that—

a) protects the documents from damage and deterioration; and
b) prevents confusion with documents currently making up the programme.

AP Reg 33 Making documents available

The operator of a risk management programme must ensure that the programme, all reference material relating to the programme, any record, and any archived documents are readily accessible or can be retrieved and made available, upon request, within 2 working days to the following persons:

a) the Director-General:
b) a person authorised by the Director-General:
c) a recognised person or recognised agency:
d) an animal product officer.

AP Reg 36 Reporting to verifier or verifying agency [relevant clauses]

a) The operator of a risk management programme must provide a copy of each evaluation report to their verifier or verifying agency.

PSP Notice B1.2 – Records

(1) The procedures for record keeping required by Regulation 23 to be in an RMP must require that any records relating to monitoring, corrective actions, and operator verification:

a) specify when the activity occurred (including the date); and
b) give a description of the results of the activity; and
c) identify who performed the activity.

(2) Records of validation information must be kept:

a) for the life of the process or activity; or
b) until the process is revalidated and new records are created (in which case the old records become archived documents, and Regulation 32 applies).

PSP Notice H1.3 – Supplier declarations for farmed fish [supplier obligation] [relevant clauses]

(3) A person who provides a supplier declaration must retain a copy of the declaration and any information used to complete it (such as information about animal feeds) for a minimum of 1 year after providing it.

(4) If a supplier declaration is provided or retained in electronic form, it must include information that enables the identification of the individual who signed the declaration to be identified.

PSP Notice H1.4 – Periodic declarations for farmed fish [supplier obligation]

(2) A person who provides a periodic declaration must retain a copy of the declaration and any information used to complete it (such as information about animal feeds) for a minimum of 1 year after the end of the period the declaration relates to.

(3) If a periodic declaration is provided or retained in electronic form, it must include information that enables the identification of the individual who signed the declaration to be identified.

19.3 Procedures

[APA Section 17, AP Reg 23, 24, 25, 31, 32, 33, PSP Notice B1.2]

19.3.1 Document Control

(1) A register or list of all RMP documents showing the version and/or date of issue at the time of registration must be kept. For multi-business RMPs the document list must also specify, where necessary, which documents relate to which business.

(2) A register or list of the current version of all documents that make up the RMP must also be kept. These lists may be one and the same. [AP Reg 24(3) & (4)]

(3) The register or list should include the site plan and all record forms (e.g. blank check sheets used for monitoring and operator verification activities) if these are separate from the procedures.

Guidance

It is common to include both the version number and date of issue of each RMP document. If more than one controlled copy of the RMP is issued, each set of documents should have additional identification showing the copy number.

The operator should maintain a register of controlled copies showing who is responsible for each copy. Authorisation of version control may be shown in several ways, including:

- signature & date on the cover page of each RMP document;
- initials & date in the header or footer of every page;
- signature & date on the document register; or
- other reliable means within an electronic system.

Refer to the RMP Manual for more information on how to create and maintain a list of documents that make up the RMP.

19.3.2 Amendments to the RMP

(1) Significant amendments to the RMP must be evaluated and registered. [APA section 25]

(2) Certain minor amendments must be notified to MPI. [APA section 26]

Guidance

Guidance for determining whether an amendment is significant or minor, and those minor amendments that need to be notified to MPI is in Appendix G of the RMP Manual. If there is still doubt as to whether the proposed changes are significant or not, you should contact your verifier or evaluator.

When notifying MPI of minor amendments, use Notification Form AP50: Minor Update to Risk Management Programme Details.

(3) Amendments that are not significant may be made at any time to update the RMP.

(4) Amendments to RMP documents must be clearly identified.

Guidance

Options for identifying amendments include use of *italics*, highlighting the amended text, or other electronic means, or identifying the amended documents and/or section(s) in the amendment register.

The document control procedure may also allow for minor changes to be made by hand. In such cases, the nominated person should sign and date the changes to indicate they are legitimate. This may occur at the time of annual review or more often as required.

(5) Electronic versions of RMP documents must be protected with an effective backup system.

Guidance

It may be a good idea to keep electronic copies of the RMP off-site in case of major loss (such as an earthquake that prevents building re-entry).

(6) Details of all amendments must be recorded.

Guidance

An amendment register is a good way of keeping a record of all amendments and may be presented in a table with the headings: document name or reference, details of amendment, reason for amendment, date of change. This may be the same register or list as described in 19.3.1(1).

19.3.3 Record Keeping

(1) All GOP and processing records must be kept in accordance with AP Reg 23 and 33, and PSP Notice B1.2.

(2) Electronic records must be backed up and protected from corruption, damage or loss.

(3) The person entering the data must be identified according to systems developed for the protection of electronic records.

Guidance

An electronic signature should:

a) identify the person who has signed the document;
b) indicate the person who signed the document is approving the information in the document (for example, by placing the electronic signature at the end of the information in the document); and
c) be reliable given the purpose and circumstances for which it is required; and not be altered, or if it can be altered, any alteration must be able to be identifiable.

(4) Records must:

a) accurately reflect the observations made;
b) facilitate verification;
c) if kept in hard copy, documented on permanent materials; and
d) be readily retrievable.

Guidance

Consideration should be given to the durability of paper on which records are kept (pen does not write well on wet paper), and its suitability for storage (thermal papers can fade over time). Pencil is not suitable for recording information because it is easy to erase or alter.

(5) Any alterations made to hard copy records should be made alongside the original entry and initialled by the person amending the record.

Guidance

The use of white out products (such as Twink™) is not acceptable to auditors as it is impossible to see what the original entry was.

(6) The manner in which the date and time are documented in the record should be appropriate to the activity being monitored.

Guidance

For some observations (e.g. process temperatures) the exact date and time are expected to be recorded. However, for other observations (e.g. checking compliance with protective clothing requirements) a more general record over a specified time period may be acceptable.

(7) Validation records must be kept in accordance with PSP Notice B1.2(2).

(8) Validation records such as CCP, process or GOP validation should be kept for at least the life of the process or activity (unless new validation is carried out).

(9) Validation records that relate to a product, such as shelf life validation must be kept for as long as the product is in production (unless new valdation is carried out).

(10) Obsolete validation records must be kept for at least 4 years. [AP Reg 32]

19.4 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

Guidance

The operator should check, at least annually, that all documented procedures that make up the RMP are appropriate.

19.5 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) Records must include:

a) monitoring carried out, problems identified and corrective action taken;
b) validation records;
c) list of documents comprising the RMP;
d) a record of RMP amendments; and
e) training records of persons involved in key tasks.

Part 20: Supply and Reception of Fish and Shellfish

20.1 Purpose and Scope

To ensure that all edible seafood material and product supplied and received for processing is suitable for processing or fit for its intended purpose and meets the regulatory requirements.

For the sources of hazards, refer to the Generic RMP models for the processing of seafood product.

Guidance

The requirements for AMDs are in Part 7, Subpart 1 of the AP Regs and PSP Notice H1.6 apply.

20.2 Mandatory Requirements

AP Reg 38 Operator of risk management programme must report certain information to Director-General

The operator of a risk management programme must report to the Director-General or the operator's verifier or verifying agency if the operator has reasonable grounds to believe that information a supplier provides about animal material or animal product is materially false or misleading.

AP Reg 56 Operator must ensure suitability of animal material, animal product, and other inputs

(1) The operator of a risk management programme must ensure that animal material, animal product, and other inputs that the operator produces or receives from a supplier are suitable for processing.

(2) The operator of a risk management programme must—

a) manage risk factors in relation to inputs; and
b) take actions (including application of processing steps) to control those risk factors.

AP Reg 109 Farmed animals suitable for processing [relevant clauses]

(1) A supplier or other person in charge of farmed animals must ensure that, if farmed animals under their control have been treated with, been fed, or had access to any agricultural compound, veterinary medicine, or other substance that is likely to adversely affect the suitability of animal material for processing, they are managed to ensure that they are suitable for processing.

(2) A supplier or other person in charge must not supply a farmed animal for processing for human consumption if the animal has been treated with an unregistered veterinary medicine that is not exempt from registration under the Agricultural Compounds and Veterinary Medicines Act 1997, unless approval is given under regulation 120.

AP Reg 113 Health of farmed animals for supply [relevant clauses]

(1) A supplier or other person in charge of farmed animals for primary processing for human or animal consumption must—

b) present the animals in a generally healthy condition; and

(2) In this regulation, generally healthy means that an animal appears outwardly healthy and the supplier or other person in charge has no reason to suspect that the animal is or was moribund or infected with disease that would make the animal unsuitable for processing.

AP Reg 119 Presentation of animal material for primary processing

A supplier or other person in charge of animal material must not present it for primary processing unless—

a) the supplier or other person in charge has met regulatory requirements; or
b) the Director-General approves the presentation under regulation 120 and any conditions of presentation are complied with.

AP Reg 122 Checks [relevant clauses]

(1) A supplier, other person in charge of animal material must carry out regular checks to ensure that they are compliant with regulatory requirements.

(2) The checks must be carried out in accordance with any requirements specified in supplementary notices.

AP Reg 125 How records must be kept

(1) A supplier, other person in charge of animal material must keep records—

a) to demonstrate their compliance with relevant requirements under this Part; and
b) in accordance with any supplementary notices or notices under section 167(1) of the Act for the purposes of section 77H(2) of the Act.

(2) The supplier, other person in charge of animal material must ensure that the records are legible and are stored—

a) in a manner that protects the records from damage, deterioration, or loss; and
b) in an accessible form.

PSP Notice E1.1 – Restrictions on supply of animal material for human consumption

(1) Animal material must not be supplied for processing for human consumption if the supplier has reason to believe that the animal material may have residue levels of any chemical, or have been exposed to feed or environmental contaminants, that may result in the final animal product exceeding any MRL or MPL.

(2) In case of a conflict between an MRL and an MPL, the MRL prevails.

(3) Farmed animals that have been treated with a registered veterinary medicine, or a veterinary medicine exempt from registration under the ACVM Act, may be supplied for processing for human consumption only if:

a) all conditions of the registration or exemption are complied with; and
b) in the case of a restricted veterinary medicine, all aspects of the veterinary authorization are complied with; and
c) the supply of the animal material is outside the withholding period for the veterinary medicine.

PSP Notice E1.5 – Withholding periods for veterinary medicines

(1) For the purpose of this notice, the withholding period of a veterinary medicine is as follows:

a) for a restricted veterinary medicine, the withholding period specified by the authorising veterinarian:
b) for an unrestricted veterinary medicine used according to the product label, the period on the label:
c) for an unrestricted veterinary medicine used in a manner that differs from its conditions of use or approved use as specified on the label:

i) the withholding period specified by an advising veterinarian; or
ii) if a veterinarian has not advised a withholding period, the following:

1) for ruminants (e.g., cattle, sheep, deer, goats), llama, and alpaca, 91 days:

2) for monogastrics (e.g., pigs, horses, rabbits, poultry), 63 days:
3) for fish, 35 days.

PSP Notice E1.6 – Supply of animal material used in experiments, trials or research

(1) If the Director-General gives approval under Regulation 120 for the presentation for primary processing of animal material used in experiments, trials, or research (see Regulation 118), the supplier must:

a) notify the processor in writing at least 24 hours before presenting the animal material for primary processing; and
b) on presentation, provide the processor with:

i) a copy of the Director-General's approval; and
ii) a statement signed by the supplier to the effect that all conditions of the approval have been complied with.

PSP Notice H1.2 – Documents required for supply

(1) Suppliers of farmed fish must present farmed fish to a primary processor either:

a) with a properly completed supplier declaration (see clause H1.3), which must be available to the processor before they make decisions on the suitability of the fish for processing; or
b) in accordance with a periodic supplier declaration (see clause H1.4).

(2) Suppliers of farmed fish must ensure that fish consignments are identified to enable traceability to the supplier and the supplier declaration or periodic declaration.

(3) Farmed fish may be supplied under a periodic declaration only if the supplier is named in the processor's RMP.

(4) If a supplier who has supplied fish for primary processing under a periodic declaration becomes aware that any of the fish did not comply with the periodic declaration, the supplier must immediately notify the processor.

PSP Notice H1.3 – Supplier declarations for farmed fish [Paraphrased]

(1) A supplier declaration for farmed fish is properly completed only if it contains all the information required by clause H1.3 (2) or uses this form; and

a) is signed by an individual who:

i) has sufficient knowledge to accurately complete it; and
ii) has authority to sign it; and

b) aligns with the identification of the fish it relates to.

(2) A person who provides a supplier declaration must retain a copy of the declaration and any information used to complete it (such as information about animal feeds) for a minimum of 1 year after providing it.

(3) If a supplier declaration is provided or retained in electronic form it must include information that enables the identity of the individual who signed the declaration to be identified.

PSP Notice H1.4 – Periodic declarations for farmed fish

(1) Every periodic declaration relating fish must set out or include at least the following:

a) the full name or trading name, physical address and contact details of the producer:
b) the name of the primary processor they are being supplied to:
c) the fish species to be supplied:
d) confirmation that, unless the producer notifies the processor otherwise, at the time of harvest:

i) the fish will not be within the withholding period (see clause E1.5) of any veterinary medicines with which they have been treated; and

ii) the fish will not be exposed to a substance (including an agricultural compound) that might result in any fish animal material exceeding any MRL or MPL; and
iii) the feed of the farmed fish will not be a source of contamination; and
iv) the fish or fish carcasses will be free from signs of illness or disease; and
v) the fish will not be harvested under environmental conditions that would lead to unacceptable contamination of the fish; and

e) confirmation that the fish (other than live fish) will be subject to chilling or freezing between harvest and dispatch to the processing premises:
f) the period to which the declaration applies, which may be no more than 6 months:
g) a statement confirming that the declaration is true and accurate:
h) the signature of a person who:

i) has sufficient knowledge to accurately complete the declaration; and
ii) has authority to sign it.

(2) A person who provides a periodic declaration must retain a copy of the declaration and any information used to complete it (such as information about animal feeds) for a minimum of 1 year after the end of the period the declaration relates to.

(3) If a periodic declaration is provided or retained in electronic form it must include information that enables the identity of the individual who signed the declaration to be identified.

PSP Notice H1.5 – Handling fish

(1) Suppliers of fish must ensure that the fish are:

a) handled in a manner that minimises contamination and deterioration; and
b) in the case of fish (other than live fish) for human consumption, subject to chilling or freezing from the time of catching or harvesting to the time of arrival at the processing premises.

PSP Notice H2.3 – Reception of fish

(1) Processors must not accept farmed fish for processing (other than initial storage) unless the fish are covered by:

a) a properly completed supplier declaration (see clause H1.3); or
b) a periodic declaration (see clause H1.4).

(2) A processor may accept fish under a periodic declaration only if:

a) the supplier is named in the processor's RMP; and
b) the processor's RMP sets out requirements that the supplier must meet in terms of identifying illness and disease, animal treatments and feeds, and the exposure status of the fish, and the processor is satisfied that the supplier has procedures to meet those requirements.

(3) Before accepting farmed fish for processing, processors must check:

a) the content of the relevant supplier declaration to confirm that the fish are suitable for processing; and
b) whether a supplier supplying under a periodic declaration has given notice that any fish supplied under it do not fully comply with the declaration.

(4) A processor may accept farmed fish for processing without a properly completed supplier declaration if the fish is held pending provision of a replacement declaration that clarifies the status of the fish as suitable for processing.

(5) When fish arrives at the processing premises the processor must confirm:

a) that the fish does not show signs of unacceptable contamination or deterioration given its intended purpose; and
b) for fish for human consumption (other than live fish), that the fish is chilled or frozen.

(6) If fish for human consumption has passed through an animal material depot, the processor must confirm that the depot is listed under Part 10 of the Regulations.

(7) Despite subclause (1), a processor may process fish that has been seized under section 207 of the Fisheries Act 1996 if the processor:

a) has the written approval from the Director-General under Regulation 120 before processing the fish; and
b) complies with any conditions of that approval.

(8) Where processing of fish for human consumption takes place on a fishing vessel, the processor:

a) must check the fish on landing or at the start of processing for:

i) contamination with foreign matter that cannot be completely removed during processing; and
ii) contamination with chemicals (such as fuel oil, cleaning compounds, etc.); and
iii) the presence of strong odours or other indications of microbiological spoilage; and

b) must not process unsuitable fish.

PSP Notice H3.4 – Reception of shellfish

(1) A processor may accept shellstock only if:

a) the containers are of appropriate hygienic status; and
b) the shellstock is alive, not damaged and not contaminated by material potentially hazardous to human health; and
c) the shells are reasonably free of mud, marine flora, bottom sediments and detritus; and
d) the temperature control requirements in Schedule 4 of the BMS RCS have been complied with.

(2) Shellstock must not be accepted for processing if:

a) the shellfish harvest declaration (as required by the BMS RCS) has not been supplied or is incomplete; or
b) the labelling is incomplete or missing.

(3) Despite subclause (2), a processor may hold shellstock pending the supply of a completed or replacement shellfish harvest declaration or correct labelling if:

a) the shellstock is kept separate from other shellstock; and
b) an Animal Product Officer is notified within 24 hours of the arrival of the shellstock; and
c) the shellstock is detained under refrigerated storage until the Animal Product Officer has determined the disposition of the shellstock.

(4) If the processor is aware, or has received information, that gives reasonable grounds to suspect that the information in the shellfish harvest declaration is false or misleading, or cannot be relied on, the processor must:

a) not accept the shellstock; and
b) inform the Animal Products Officer within 24 hours.

(5) Processors must have procedures to deal with situations where the shellfish harvest declaration or labelling does not confirm the status of the animal material as suitable for processing.

Guidance

Some markets may require specific country listings for animal material depots. For example, the EU requires depots to be listed if they hold fish that is intended for export to the EU.

Guidance

For detailed information on requirements for harvest declarations, refer to Part 11.8 of the Animal Products Notice: Regulated Control Scheme – Bivalve Molluscan Shellfish for Human Consumption.

Also see Part 13 Ingredients, Additives and Other Inputs for reception of other raw materials.

20.3 Procedures

[APA section 17, AP Reg 10, 38, 56, 109, 113, 119, 122, 123, PSP Notice H1.2-1.6, H2.3, H3.4]

20.3.1 Supply and Transport of Fish to Primary Processor

(1) Suppliers of fish (other than live fish) must ensure that they are:

a) subjected to chilling or freezing from the time of catching until they arrive at the premises; and
b) transported in clean containers and in a way that minimises contamination.[PSP Notice H1.5]

(2) Live fish (other than BMS), and pāua that are intended for canning in New Zealand, should be transported in cool conditions and protected from sun and wind, so that they are alive and undamaged on arrival at the processing premises.

20.3.2 Supply and Reception of Wild Fish

(1) Procedures must be documented and implemented for the reception of wild fish into the premises.

(2) The procedures must include checks to determine if the fish is suitable for processing or is fit for its intended purpose, and specify corrective actions to be taken when requirements are not met.

Guidance

Signs of spoilage in finfish may include:
- dull gritty colours with yellow-brown dotting slime;
- concave, opaque, sunken or discoloured eyes;
- grey-brown or bleached gills, opaque yellow slime, thick or clotting gills; and
- flesh odour amines, ammonia, milky lactic, sulphide, faecal, putrid or rancid odours. [CAC/RCP 52-2003 Code of Practice for Fish and Fishery Products]

If the assessment indicates spoilage or potential temperature abuse has occurred and that the fish are not suitable for processing, the cause should be investigated and where appropriate, procedures put in place to prevent recurrence.

Rock Lobster
Rock lobsters are known to accumulate Paralytic Shellfish Toxins (PSTs) in their gut during PST biotoxin events. The rock lobster industry has implemented an NP to manage this at the point of fishing. However, if lobsters are received from an area under warning due to PSTs, and there is a potential for contamination, they need to be processed in accordance with section 21.3.3 Fish Processing (Other than Primary Processing of Bivalve Molluscan Shellfish).

(3) Fish processed on fishing vessels must be checked on landing on the fishing vessel or at the start of processing to ensure that they are suitable for processing, including checks for:

a) contamination with foreign matter that cannot be completely removed during processing;
b) contamination with chemicals (e.g. fuel oil, cleaning compounds, filth);
c) the presence of strong odours or other indications of microbiological spoilage; and
d) in the case of fish that must be alive before processing (e.g. rock lobsters), for signs that the fish is alive on arrival at the fishing vessel.

(4) Fish received at all other premises must comply with (3) and, in addition, be checked for evidence that:

a) the fish has been handled and transported in an appropriate manner (e.g. the presence of ice, temperature of the fish); and
b) it has been appropriately labelled or identified to provide for adequate traceability.

Guidance

Also see Part 16, Table 5 Supply chain step and examples of traceability records.

(5) Processors receiving fish species that are susceptible to histamine formation must have appropriate procedures in place to ensure that histamine cannot form so that the regulatory limit for histamine is met. [FSC Std 1.4.1, Sched 19]

Guidance

Marine species most susceptible to histamine formation are Scombridae, Clupeidae, Engraulidae, Coryphaenidae, Pomatomidae, and Scomberesocidae. Examples include tuna, kahawai, mackerel and kingfish.

The regulatory limit of 200mg/kg histamine is specified in the FSC for fish and fish products. The key control measure to minimise histamine formation is to keep the fish under chilled temperatures at all stages in the supply chain from harvest until a preservation step is applied that will inhibit or inactivate the histamine-forming bacteria. Numerous documents are available to advise operators about GOP to ensure that this limit is not exceeded. These include:

- Histamine. A Guideline for the Seafood Industry. SSC, October 2013. Fish species that are susceptible to histamine formation are listed in section 5.0 of this guide.
- Joint FAO/WHO Expert Meeting on the Public Health Risks of Histamine and Other Biogenic Amines from Fish and Fishery Products, November 2013.
- Harvesting, Processing, Storage and Distribution of Fish and Fishery Products at Risk for Scombrotoxin (Histamine Formation). [CAC/RCP 52-2003 Code of Practice for Fish and Fishery Products]

20.3.3 Supply and Reception of Farmed Fish (excluding BMS)

(1) Procedures must be documented and implemented for the reception of farmed fish into the premises.

(2) The procedures must:

a) include the checks to be carried out to confirm that the requirements of the supplier declaration (or periodic supplier declaration-) have been met;
b) describe how the recognised verifier or MPI will be notified within one working day if there is any reason to suspect that the information in the supplier declaration cannot be relied upon;
c) include the checks to be carried out to determine if the fish is suitable for processing or fit for its intended purpose; and
d) specify the corrective actions to be taken when requirements are not met.

Guidance

The supplier declaration or periodic supplier declaration addresses any treatments that the fish may have been subject to, maximum residue limits and/or maximum permissible limits, and fish handling. The declaration should be traceable to each harvest e.g. by harvest date or batch numbering.

Potential feed contaminants such as chemicals (including heavy metals, pesticides, herbicides, mycotoxins) and microbiological contamination should also be considered. It is recommended that:

- guarantees are obtained from feed supplier(s) to confirm that the feeds are formulated as expected and meet agreed specifications;
- feeds are periodically checked to ensure compliance with agreed specifications;
- feeds are stored to prevent spoilage, mould growth and contamination, and used within any expiry dates; and
- systems are implemented to allow traceability of feed batches to seafood stock. [CAC/RCP 52-2003 Code of Practice for Fish and Fishery Products]

Confirmation that the live fish were not showing any signs of disease or illness e.g. abnormal behaviour, open sores, side swimming, at the time of harvest should also be sought, and that there were no environmental conditions that would result in fish being unacceptable for harvest e.g. fuel spills.

20.3.4 Reception of Bivalve Molluscan Shellfish

(1) Procedures must be documented and implemented for the reception of BMS to confirm that the BMS/shellstock meets regulatory requirements.

(2) The procedures must include checks to determine if the BMS is suitable for processing or fit for its intended purpose, and specify corrective actions to be taken when requirements are not met.

Guidance

Once placed under temperature control, BMS should continue to be cooled on a downward trend towards 10°C.

20.3.5 Reception of Imported Fish

(1) Procedures must be documented and implemented for the reception of imported fish.

(2) The procedures must specify:

a) the checks to be carried out to determine if the fish is suitable for processing or fit for its intended purpose;
b) the checks to be carried out to ensure that the requirements for imported products are met; and
c) the corrective actions to be taken when requirements are not met.

(3) Food importers must be registered under the Food Act 2014.

(4) The operator must obtain sufficient information from their supplier to confirm the imported fish is suitable for processing or is fit for its intended purpose.

Guidance

Biosecurity and food safety risks associated with the importation of food into New Zealand are managed under the Biosecurity Act 1993 and the Food Act 2014. Food importers must meet relevant requirements of both Acts. This includes ensuring that imported food meets the requirements of New Zealand food legislation, including the FSC. The following are key documents that food importers must comply with.

Import Health Standards are issued under the Biosecurity Act 1993. All imported food must meet biosecurity requirements specified in applicable Import Health Standards (IHS) to gain biosecurity clearance for entry into New Zealand.

The Food Notice: Requirements for Registered Food Importers and Imported Food for Sale is issued under the Food Act 2014 to manage risks to consumers. This Notice specifies which foods are of high regulatory interest (HRI) and that are of increased regulatory interest (IRI). Consignments of imported food categorised as HRI or IRI require food safety clearance in addition to biosecurity clearance to be allowed entry into New Zealand. At the time of writing, the following fish were identified as HRI food:

- Fish species susceptible to production of histamine;

- Puffer fish;
- Chilled ready-to-eat smoked and smoked-flavoured fish
- Ready-to-eat crustaceans – lobsters, crabs, bugs, shrimps and prawns and their products;
- BMS and products containing BMS.

The MPI website provides detailed information for importers, e.g. Imported foods that require food safety clearance and Responsibilities of a registered food importer.

Imported fish and other inputs may have foods safety hazards that differ from those that are reasonably likely to occur in New Zealand. It is important that these hazards are not overlooked when applying the principles of HACCP.

If imported product is to be re-exported, additional export requirements may apply. For example, see OMAR 01-172.

20.4 Monitoring

[APA section 17, AP Reg 10, 56, 109, 113, 119, 122, PSP Notice H1.2, 1.3, 1.4, 1.5, 1.6, 2.3, 3.4]

(1) The farmed fish supplier and RMP operators must carry out regular checks on the effectiveness of, and compliance with documented procedures.

Guidance

Every consignment should be checked on reception. The nature and extent of the monitoring will depend on the type(s) of product received.

20.5 Records

[APA section 17, AP Reg 23, 38, 125, PSP Notice B1.2, H1.3, 1.4, 2.3, 3.4]

(1) The farmed fish supplier and RMP operators must keep records demonstrating compliance with documented procedures.

(2) These records must include:

a) monitoring carried out, problems identified, and corrective action taken; and
b) training records for persons involved in key tasks.

(3) Other records that should be used to demonstrate compliance include:

a) landing dockets;
b) harvest declarations and tags;
c) supplier declarations;
d) growing area opening and closure notifications; and
e) reception/load-in check sheets.

Guidance

Examples of other records that could be used to demonstrate compliance are:

- certificates of analysis or supplier guarantees;
- list of BMS depots or fish depots;
- list of BMS sorting sheds and approved BMS transporters; and
- transport checks for incoming goods.

Refer to Part 19 for record keeping requirements.

Part 21: Fish Processing (Other than Primary Processing of Bivalve Molluscan Shellfish)

21.1 Purpose and Scope

To ensure that fish and fish product is processed in a way that minimises contamination and deterioration, and maintains its fitness for intended purpose.

This section applies to operators of land-based premises (including those processing farmed fish) and fishing vessels that process fish at sea and require RMPs.

In this section, **fish** means all finfish, crustaceans, echinoderms, and molluscs (squid, pāua) but not bivalve molluscan shellfish.

For further information about secondary processing, e.g. heat treatment, smoking, drying, high pressure processing, refer to the Further Processing Guidance Document.

For the sources of hazards, refer to the Generic RMP models for the processing of seafood product.

21.2 Mandatory Requirements

AP Reg 56 Operator must ensure suitability of animal material, animal product, and other inputs

(1) The operator of a risk management programme must ensure that animal material, animal product, and other inputs that the operator produces or receives from a supplier are suitable for processing.

(2) The operator of a risk management programme must—

a) manage risk factors in relation to inputs; and
b) take actions (including application of processing steps) to control those risk factors.

AP Reg 58 Processing must minimise contamination and deterioration

(1) The operator of a risk management programme must ensure that animal material, animal product, and other inputs are processed and handled in a way that manages and minimises their contamination and deterioration.

(2) The operator of a risk management programme must ensure that animal material, animal product, and other inputs are protected from adulteration.

PSP Notice C3.6 – Repacking

(1) If any animal material or animal product is repacked, the repacking must be done under appropriately hygienic conditions and in manner that ensures that any material or product that is not enclosed in any packaging is protected from contamination and maintains its suitability for processing or fitness for its intended purpose.

PSP Notice H2.4 – Handling and processing fish

(1) Handling and processing of fish must be carried out without unnecessary delay and in a manner that minimises the contamination and deterioration of the fish.

(2) Fish, other than live fish, must be stored chilled or frozen, unless they are to be processed immediately.

(3) If the following are harvested from water that is likely to be contaminated (such as with biotoxin), they must be managed in a way that minimises relevant risk factors:

a) pāua, kina, crabs, rock lobsters and eels; and
b) BMS processed for animal consumption.

PSP Notice H2.5 – Chilling and freezing fish for human consumption [relevant clauses]

(1) Any chilling or freezing of fish for human consumption must be conducted without unnecessary delay.
(6) Shucked pāua must not be held at more than 1°C for more than 3 days.

Guidance

Requirements that must be met under the Animal Welfare Act can be viewed on the MPI website by searching "animal welfare". For example, the Animal Welfare (Care and Procedures) Regulations 2018 and the Commercial Slaughter Code of Welfare (October 2018) specify requirements for crabs, rock lobsters and freshwater crayfish, and farmed and wild captured finfish (including eels).

21.3 Procedures

[APA section 17, AP Reg 10, 56, 58, PSP Notice H2.4, 2.5]

21.3.1 Live Fish

(1) Fish that are sold live (e.g. lobsters, eels) must be alive at the time of packing and in a condition such that, under normal circumstances, they will remain alive during transport to their final destination.

(2) The outer surfaces of live fish, in particular pāua and whelks, should be reasonably free from dirt, weed and marine organisms.

(3) Live fish should be packed at a temperature sufficient to maintain the species in a live state during transport.

Guidance

If appropriate, cooling media should be added to the container to maintain the required conditions during transit.

(4) Ice used in direct or indirect contact with fish: [PSP Notice Chapter C, subpart 4]

a) must be produced from water that is fit for purpose (including seawater); and
b) must be manufactured, stored, handled and transported so as to prevent contamination and to retain its quality at point of use; and
c) when delivered from another premises, should be inspected on arrival, and rejected if delivered in a manner that may have permitted contamination (e.g. from dust, chemicals, foreign matter) or if contamination is evident.

(5) Cooling packs such as chilling or freezer packs must comply with the requirements for packaging (See Part 15) .

21.3.2 Heading, Gutting, Filleting and Other Processing

(1) Wet fish must be stored chilled or frozen unless they are to be processed immediately.

(2) Where relevant, the operator should establish temperature and/or time parameters to ensure that fish and fish product are processed without unnecessary delay to minimise deterioration.

Guidance

To ensure that product is processed quickly, operators should implement maximum processing times for filleting or other process steps, to minimise the time that fish are out of temperature control. A good guide is for product to be out of temperature control for no more than 2 hours and/or for product not to exceed 7°C. When setting time and temperature parameters, consider the process flow, processing steps and species. These parameters should be monitored at appropriate frequencies, and corrective actions to be taken if the parameters are exceeded documented in the RMP. If regular checks demonstrate good control, the monitoring frequency may be reduced (e.g. to monthly).

(3) Processing operations such as gutting, skinning, tailing and filleting must be carried out in a manner that minimises contamination of the fish or fish product.

(4) When fish are washed after gutting, water that is fit for purpose (including seawater) (or water of an alternative standard) must be used.

(5) Eels or other freshwater species that are harvested from waterways that have public health warnings in place for biological or chemical hazards may be processed only if the hazard(s) can be managed.

Guidance

Rock lobster, paua, kina, crabs and eels are known to accumulate Paralytic Shellfish Toxins (PSTs) in their gut during PST biotoxin events.

21.3.3 Shucking and Gutting of Shellfish (other than BMS)

(1) Shellfish to be shucked must be:

a) alive and undamaged;
b) held in cool conditions; and
c) protected from the sun and wind prior to shucking.

(2) The shucking process should be separated from other processes (e.g. packing) by time, adequate space, or physical barriers.

(3) Shucked shellfish must be stored chilled or frozen unless they are to be further processed immediately.

(4) Pāua or crab that are received from areas that are closed to the harvesting of BMS due to a PST event, must be:

a) separated and identified; and
b) gutted and washed, or the hazard must be managed in some other way

(5) In addition to complying with the requirements in sections 21.3.3(1) to (4), gutted pāua must be washed in water that is fit for purpose (including seawater) immediately after gutting, and then drained. An exception applies if the unwashed pāua is being sent for canning in New Zealand.

Guidance

Separated pāua gut does not need to be washed.

Current advice is that kina received from areas that are closed to the harvesting of shellfish should not be used for human consumption. To process kina for human consumption, evidence would be needed that the biotoxins are controlled.

(6) Rock lobster received from areas that are closed to the harvesting of BMS due to a PST event, and the level of PST accumulation has not been assessed or is unknown must be processed to manage any hazards.

Guidance

The Rock Lobster Industry has implemented a National Programme to manage the risk of PSTs in lobsters, which includes communication of event information to RMP operators. Normally this will mean that if rock lobster is sourced from an area under warning or closure it:

- has been assessed and is low risk; or
- has been tested and is under the regulatory limit for paralytic shellfish poison (PSP) in shellfish.

However, if lobster is fished from areas under closure and it is identified that the PST risk is unknown, it can be either:

- identified to maintain traceability, held in tanks and tested for PSTs; or
- processed to remove the gut, i.e. tailed and only the tail sold for human consumption.

21.3.4 Thawing

(1) To minimise deterioration and contamination of fish or fish product, process criteria for thawing fish (including air and water thawing) should be established and implemented.

Guidance

When developing thawing criteria, consider product loading, air or water temperatures, water flow rate (if water thawing), time of thawing and temperature of the fish at the completion of thawing. Practical factors such as number of staff, the speed at which a species can be processed, and equipment failure should also be taken into account.

Generally, fish are thawed in water at a water temperature of 18°C, with a final product temperature of -1°C to 1°C. [Fish for Food, SITO 1998].

(2) Fish that have been thawed must be processed without unnecessary delay or must be held under chilled conditions.

21.3.5 Tempering

Guidance

The principles of thawing apply to tempering, but the product temperature remains colder than the freezing point of the product.

21.3.6 Dropped Product

(1) The operator should document and implement procedures for managing dropped product.

Guidance

Dropping product should be considered unacceptable and every effort should be made to prevent it.

Dropped product procedures should be developed taking in account the nature of the situation, e.g. what has been dropped and where. In general, dropped product should be immediately picked up and its suitability for continued processing assessed. The product may be washed and/or trimmed, or disposed of. If it is to be returned to the processing line, this must occur hygienically. The staff member involved should complete an appropriate hygiene routine before resuming their role.

Any product that is dropped in more highly contaminated areas (such as drains, high traffic areas or outside of processing areas) should be downgraded as not fit for human consumption. Decisions about whether product should be disposed of is to be based on food safety considerations rather than economics.

21.3.7 Specific hazards and control measures

21.3.7.1 Psychrotrophic Non-proteolytic *C. botulinum* (type E)

(1) When processing potentially "at risk" fish (e.g. imported fish), an assessment must be carried out to determine whether psychrotrophic non-proteolytic *C. botulinum* (type E) is a hazard that is reasonably likely to occur and if so, implement measures for its control. [APA section 17(3)]

Guidance

C. botulinum type E is able to grow and produce toxins at temperatures as low as 3°C in low oxygen environments. Therefore, it is listed as a hazard in the MPI Hazard database and should be assessed as a potential hazard in chilled, vacuum packed or modified atmosphere packed products with a shelf life of 10 days or more and that are stored above 3°C.
If *C. botulinum* type E is identified as a hazard that is reasonably likely to occur, growth and toxin formation can be prevented using a range of control measures. These include packaging and atmosphere, storage temperature, pH, salt or water activity. See Table 7 for examples of control measures for *C. botulinum* type E and a comparison with controls for *L. monocytogenes*.

Table 7: Control measures for *C. botulinum* type E and *L. monocytogenes* (in addition to chilled storage)

Control measure	*C. botulinum* type E	*L. monocytogenes*
An equilibrated pH throughout the product	pH 5 or less	pH 4.4 or less
Minimum salt content throughout all parts of the product	3.5% in the aqueous phase	More than 6% in the aqueous phase[6]
Water activity (a_w) in all components of the product	0.97 or less	0.92 or less
Temperature control (minimum temperature for growth)	3°C	-1.5°C
Heat treatment at the slowest heating point in the product	90°C for 10 minutes or equivalent lethality. This will provide a 6 log reduction on the spore concentration	72°C for 66 seconds[7, 8]

Further guidance on the controls for *C. botulinum* in chilled products can be seen in the following document: The safety and shelf life of vacuum and modified atmosphere packed chilled foods with respect to non-proteolytic *C. botulinum.* Further guidance on the processing of Smoked Fish, Smoke-Flavoured Fish and Smoke-Dried Fish can be seen in CODEX STAN 311-2013.

21.3.7.2 Parasites

(1) Processors of fish species that are susceptible to the presence of parasites must have procedures in place for their management.

[6] FDA (2001) Processing Parameters Needed to Control Pathogens in Cold-Smoked fish.

[7] These are the default cooking parameters for seafood product. Refer to the Further Processing Guidance Document, Chapter 2, Section 1 for further heat treatment parameters for specific seafood products.

[8] New Zealand Institute for Crop and Food Research Limited (1998). Guidelines for the Safe Preparation of Hot-smoked Seafood in New Zealand.

Guidance

Species such as barracouta, jack mackerel, red cod and ling are more susceptible to parasites, especially worms. Procedures for their control should include quick and hygienic gut removal, visual examination, and training for staff (Also see section 3.4.11). As parasites die during freezing, if the fish is frozen, parasites are not considered a food safety hazard. Freezing does, however encourage some parasites to come to the surface. Parasites in susceptible species are not considered a wholesomeness risk factor as they are not unexpected in the product. However, they are considered to be a wholesomeness risk factor in species where their presence is not expected.

If freezing is used as a control measure, its effectiveness depends on a number of variables e.g. the freezing temperature, time to freeze, the time the fish is held frozen, the species and source of fish, and the type of parasite. For example, flukes are more resistant to freezing than tapeworms and roundworms.

The following times and temperatures are sufficient to kill all parasites (unless the fish are particularly large e.g. thicker than 15 cm):

- -20°C or below for 7 days (total time); or
- -35°C or below until frozen solid and storing at -35°C or below for 15 hours; or
- -35°C or below until solid and storing at -20°C or below for 24 hours.

Refer to the FDA Fish and Fishery Products Hazards and Controls Guidance (Chapter 5) for more information.

Freezing at -18°C for 24 hours is an effective control measure for Anisakis. [Generic RMP Models for the Processing of Seafood Product, MPI July 2011].

Most people cook fish mitigating the risk further.

21.3.7.3 Histamine

(1) Processors of fish species that are susceptible to histamine formation must have procedures in place to ensure that the regulatory limit for histamine is met. [FSC Std 1.4.1, Sched 19]

Guidance

In most cases, GOP should be sufficient to manage histamine formation. However, operators processing histamine forming fish species should review their procedures to confirm that the controls are effective. Also, see section 20.3.1 for links to further guidance material.

21.3.7.4 Heavy Metals and Other Chemical Contaminants

(1) Processors must have procedures in place to ensure the regulatory limits for metals and contaminants are not exceeded. [FSC Std 1.4.1, Sched 19]

Guidance

Refer to the National Chemical Residues Programme on the MPI website for further details about the chemical residues monitoring programme.

21.3.7.5 Carbon Monoxide

(1) The FSC prohibits the use of carbon monoxide in the processing of fish (other than carbon monoxide that is naturally present or occurring in smoke), if its use results in a change or fixes the colour of the flesh of the fish. This applies to both its use as a:

a) processing aid, under standard 1.3.3, where its use is prohibited; and
b) food additive, under standard 1.3.1, where there is no permission for use.

Guidance

Use of carbon monoxide for colour preservation occurs typically in species where red colour is important. Its use is of particular concern in relation to histamine poisoning, as it can make inferior quality fish look fresher or mask the decomposition, which would otherwise warn against consumption.

21.3.7.6 Polycyclic Aromatic Hydrocarbons (PAH)

(1) Smoking of fish should be carried out in a manner that minimises the formation of polycyclic aromatic hydrocarbons (PAH).

Guidance

This can be achieved by following the Code of Practice for the Reduction of Contamination of Food with Polycyclic Aromatic Hydrocarbons (PAH) from smoking and Direct Drying Processes (CAC/RCP 68-2009). Also see the Smoking Part of the Guidance Document: Further Processing on the MPI website.

21.4 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

Guidance

The frequency and type of monitoring will depend on the nature of the operation and the degree of risk if hazards are uncontrolled. Monitoring options include checks during processing (including CCP monitoring), and checks to confirm that operations are carried out according to documented procedures.

21.5 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) These records must include:

a) monitoring carried out, problems identified, and corrective action taken; and
b) training records of persons involved in key tasks.

Guidance

Examples of other records that could be used to demonstrate compliance are:

- processing records, e.g. thawing records;
- CCP records; and
- daily checks.

Refer to Part 19 for record keeping requirements.

Part 22: Bivalve Molluscan Shellfish Processing

22.1 Purpose and Scope

To ensure that bivalve molluscan shellfish are processed in a manner that minimises contamination and deterioration, and maintains their fitness for intended purpose. This Part covers only primary processing of bivalve molluscan shellfish. Heat shocking is considered primary processing. Refer to Part 21 for secondary processing.

For the sources of hazards, refer to the Generic RMP models for the processing of seafood product.

22.2 Mandatory Requirements

The mandatory requirements for primary processing of bivalve molluscan are extensive and detailed and so are referenced in this section rather than quoted in full as occurs in other Parts. In addition, since the detailed mandatory requirements cover most aspects of primary processing of bivalve molluscan shellfish, few documented procedures have been included in this Part.

Operators must ensure that they study all relevant clauses of the PSP Notice Part H3 and comply with their requirements.

AP Reg 56 Operator must ensure suitability of animal material, animal product, and other inputs

(1) The operator of a risk management programme must ensure that animal material, animal product, and other inputs that the operator produces or receives from a supplier are suitable for processing.

(2) The operator of a risk management programme must—

a) manage risk factors in relation to inputs; and
b) take actions (including application of processing steps) to control those risk factors.

AP Reg 58 Processing must minimise contamination and deterioration

(1) The operator of a risk management programme must ensure that animal material, animal product, and other inputs are processed and handled in a way that manages and minimises their contamination and deterioration.

(2) The operator of a risk management programme must ensure that animal material, animal product, and other inputs are protected from adulteration.

PSP Notice C3.6 – Repacking

(1) If any animal material or animal product is repacked, the repacking must be done under appropriately hygienic conditions and in manner that ensures that any material or product that is not enclosed in any packaging is protected from contamination and maintains its suitability for processing or fitness for its intended purpose.

PSP Notice Part H3

H3.2 - Definitions

Subpart 1: General processing

H3.3 - Laboratory testing
H3.4 - Reception of shellfish
H3.5 - Raw harvested BMS microbiological requirements

H3.6 - Processing BMS
H3.7 - Shucking, processing and packing BMS
H3.8 - Heat shocking
H3.9 - Repacking requirements
H3.10 - Labelling

Subpart 2: Wet Storage

H3.11 - General requirements for wet storage
H3.12 - Wet storage process water supply
H3.13 - Treatment of water for wet storage
H3.14 - Continuous flow through wet storage system
H3.15 - Recirculating water wet storage system

Subpart 3: Depuration of BMS

H3.16 - Depuration processing of BMS
H3.17 - Depuration process water: seawater supply
H3.18 - Depuration process water: water standards
H3.19 - Shellfish storage
H3.20 - Depuration unit: loading and unloading
H3.21 - Cleaning and sanitising plant and equipment
H3.22 - Depuration process operator verification
H3.23 - Minimum operational requirements of a depuration or wet storage operation
H3.24 – Competency requirements

22.3 Procedures

[APA section 17, AP Reg 10, 56, 58, PSP Notice H3]

(1) During packing, processing and shucking, shellfish must be handled so that they are not subject to contamination or unacceptable increases in temperature and/or bacterial levels.

(2) When shellfish are processed in a room or area where other fish processing operations are performed, adequate measures must be taken to minimise contamination of the shellfish by the other operations (e.g. by splash, personnel, dual use of appliances) or from any other source.

Guidance

To protect shellfish from contamination from floor water, splash water or foot traffic, containers of BMS should be stored off the floor.

(3) To ensure effective control of any potential contamination, shucking operations should be separated from packing operations with the use of:

a) separate rooms; or
b) separation by barrier or distance.

Guidance

Note that there are requirements around separation of shucking and packing operations for US listed shellfish premises in the Model Ordinance: XI Shucking and Packing, Requirements for Dealers, .02 Sanitation, Section C. Prevention of Cross Contamination (external website).

(4) Shucked shellfish containers should be completely emptied in the packing area and be cleaned before they are returned to the shucking area.

(5) Shucked shellfish must be packed in clean containers made from safe materials.

(6) Shucked shellfish must only be packed into containers that are labelled in accordance with Part 17.

(7) Ice used in direct or indirect contact with shellstock or shucked shellfish:

a) must be manufactured in a premise operating under the APA, or the Food Act 2014;
b) must be of of the quality of water that is fit for purpose (including seawater);
c) must be manufactured, stored, handled and transported so as to prevent contamination; and
d) when delivered from another premises, should be inspected on arrival, and rejected if delivered in a manner that may have permitted contamination (e.g. from dust, chemicals, foreign matter) or if contamination is evident.

(8) Staff and other persons who move from areas of lower hygienic status to a higher hygienic status must take adequate measures to minimise contamination of product.

Guidance

Hygiene routines for staff and other persons moving between areas of different hygiene status will depend on the degree of risk of contamination. Operators should consider the need for:

- hand washing;
- changing or cleaning/sanitising of outer protective clothing (aprons); and
- cleaning/sanitising of footwear.

For more detailed guidance about how to manage separation between areas of different hygiene status, see the *Listeria* Guide Part 2: Good Operating Practice.

(9) Operators who heat shock shellfish must develop a heat shock process that meets PSP Notice H3.8.

(10) The heat shock process must not result in an increase in microbiological levels in the shellfish.

Guidance

Illnesses due to the presence of *Vibrio parahaemolyticus (Vp)* appear to be on the rise, particularly in consumers of recreationanlly harvested shellfish and fish.

Vp is inactivated by heating to 65°C for a minute, or equivalent. Process steps such as heat shocking of mussels are sufficient to inactivate *Vp*. Further details about *Vp* can been seen in this datasheet.

If shellfish is sold in its raw state and in a retail ready form, but the processor intends for it to be cooked by the consumer before consumption, clear instructions are to be included on the label. If the raw shellfish (intended to be cooked prior to consumption) is sold by way of wholesale, e.g. to a food service or a retailer, sufficient information should be provided, e.g. by labelling or documentation.

Guidance

For information on shellfish labelling, see Part 17: Labelling.

22.4 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

Guidance

The frequency and type of monitoring will depend on the nature of the operation and the degree of risk if hazards are uncontrolled. Monitoring options include daily checks during processing to confirm that operations are carried out according to documented procedures.

22.5 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) These records must include:

a) monitoring carried out, problems identified, and corrective action taken; and
b) training records for persons involved in key tasks.

Guidance

Examples of other records that could be used to demonstrate compliance are:

- information necessary to trace shellfish back to their growing area source;
- harvest, landing and processing records;
- daily checks; and
- processing records.

Refer to Part 19 for record keeping requirements.

Part 23: Refrigeration and Storage

23.1 Purpose and Scope

To ensure that all seafood material and product is refrigerated and stored under appropriate conditions so that it remains suitable for processing or fit for its intended purpose.

23.2 Mandatory Requirements

AP Reg 58 Processing must minimise contamination and deterioration

(1) The operator of a risk management programme must ensure that animal material, animal product, and other inputs are processed and handled in a way that manages and minimises their contamination and deterioration.

(2) The operator of a risk management programme must ensure that animal material, animal product, and other inputs are protected from adulteration.

PSP Notice C4.2 – Storing animal material and animal product

(1) All animal material and animal product must be stored in a manner that:

a) minimises damage to its packaging; and
b) enables effective cleaning of the store; and
c) facilitates effective traceability and inventory control.

(2) Any chilled or frozen animal material or animal product that requires temperature control to ensure its suitability for processing or fitness for intended purpose must be stored:

a) in a manner that minimises contamination and deterioration; and
b) at a temperature that ensures it maintains its suitability for processing or fitness for intended purpose.

(3) Any animal material not suitable for processing for human consumption, and any animal product not fit for human consumption but fit for some other purpose, must:

a) be stored in a manner that ensures it is separated from, and is not a source of contamination to, animal material or animal product for human consumption; and
b) be kept under controlled conditions until it is adequately identified in a manner that ensures it will not be mistakenly or fraudulently released as suitable for processing or fit for human consumption.

(4) Records must be kept to demonstrate that any required temperatures are maintained during storage.

PSP Notice H2.5 – Chilling and freezing fish for human consumption [relevant clauses]

(2) Before fish (other than live fish) for human consumption that is preserved primarily by refrigeration is released from primary processing premises, it must be reduced to at least a chilled or frozen temperature, validated at its thermal centre (slowest cooling point), as follows:

a) for shucked pāua intended for canning in New Zealand, no warmer than 6°C; and
b) for chilled whole fish, between -1 and 1°C; and
c) for chilled fish product, between -1 and 4°C; and
d) for frozen fish or fish product (including shellfish), no warmer than -18°C; and
e) for brine-frozen fish, no warmer than -9°C.

(3) Subclause (2) does not apply to fish material or fish product that is further processed or transported if:

a) it is transferred:

i) between premises that both operate under RMPs that contain requirements for the transfer of material or products prior to reaching the specified temperatures, so that the relevant risk factors are managed; or
ii) from premises operating under an RMP to premises operating under a registered food control plan under the Food Act 2014, and both the RMP and food control plan contain requirements for the transfer of material or products prior to reaching the specified temperatures, so that the relevant risk factors are managed; and

b) the consigning processor:

i) identifies in their RMP who the fish material or fish product is sent to, and the recipient's RMP or registered food control plan; and
ii) ensures there is no gap in the process documentation as the fish material or fish product is transferred between programmes or plans; and
iii) ensures all relevant programmes or plans are registered before transfer.

(6) Shucked pāua must not be held at more than 1°C for more than 3 days.

PSP Notice H3.7 – Shucking, processing and packing BMS [relevant clauses]

(8) Chilled shucked shellfish must be reduced to a temperature of 4°C or less before leaving the premises and the temperature must be maintained during transport and storage.

(9) Chilled live shellfish must be reduced to a temperature of 10°C or less before leaving the premises and the temperature must be maintained during transport and storage.

(10) Despite subclause (9), chilled live shellfish may leave the premises when the temperature is greater than 10°C if they are stored at the originating premises for less than 12 hours and are maintained under temperature control at all times while in that premises.

(11) Shellfish that are to be frozen must be arranged to ensure rapid freezing and be frozen at a temperature of - 18°C or colder, with shellfish frozen solid within 12 hours from the start of the freezing process.

Guidance

Frozen solid generally means that the product temperature is -10°C or colder.

Good practice would be to ensure that product is at least - 4°C or colder on exiting the blast freezer, and reaches -10°C or colder within 12 hours from the start of freezing.

23.3 Procedures

[APA section 17, AP Reg 10, 58, PSP Notice C4.2, H2.5, H3.7]

(1) The refrigeration facilities should be capable of achieving and maintaining the outcomes listed below:

a) rapid chilling of whole fish received at the premises to a temperature between -1°C and 1°C and holding the chilled fish within this temperature range;
b) rapid chilling of processed fish and fish products produced on the premises to a temperature between -1°C and 4°C and holding the fish and fish products within this temperature range;
c) rapid freezing of fish and fish products produced on the premises to -18°C or colder; and
d) rapid freezing of brine frozen fish produced on the premises to -9°C or colder.

Guidance

Chillers may also be used for tempering product and for short term storage during processing. In such cases, there is no requirement to hold the product at 1°C.

Brine frozen fish exported to the EU can only be used for canning.

(2) Equipment used to control temperatures, and other parameters (e.g. airflow) within the refrigeration facilities should be operating at all times while the refrigeration facilities are in use.

Guidance

Continuous monitoring of refrigeration temperatures and other relevant parameters is recommended. If this is not possible, temperatures (and other relevant parameters) should be monitored periodically and at a frequency based on performance. (Also see Part 3, section 3.4.18).

If exporting, operators should check the OMARs to see whether CATRs are needed.

(3) Condensation drip onto seafood products or equipment must be minimised.

(4) Products that may taint or contaminate other products should be kept separately, or be prevented, by other effective means, from contaminating products.

Guidance

Seafood products may be stored with other foods, provided the other foods are adequately enclosed in containers and handled in a way that the seafood product is not contaminated.

(5) Seafood products that are intended for use as bait or for animal consumption should be stored separately from seafood products intended for human consumption, unless measures are put in place to minimise it from being a source of contamination.

(6) Packed products and inputs should be stored off the floor (e.g. on clean pallets).

23.4 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

Guidance

The frequency and type of monitoring will depend on the nature of the operation and the degree of risk if hazards are uncontrolled. Monitoring options include:

- daily checks of refrigerated products and storage areas to confirm that storage temperatures are met; and
- checks of all storage areas to confirm that products are stored to minimise contamination.

23.5 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) These records must include:

a) monitoring carried out (including demonstrating any required temperatures are met), problems identified and corrective action taken; and
b) traceability records. [PSP Notice C4.2]

Guidance

An example of other records that could be used to demonstrate compliance is training records for suitably skilled persons.

Refer to Part 19 for record keeping requirements.

Part 24: Products Not intended for Human Consumption

24.1 Purpose and Scope

To ensure that products for animal consumption derived from processing of seafood products for human consumption are managed to minimise contamination of products for human consumption and to ensure that the products are fit for their intended purpose.

This Part does not include requirements for operators expressly processing product intended for animal consumption.

Guidance

Some material resulting from the processing of seafood products for human consumption may be sold as bait. Under the APA, bait is not considered to be material for animal consumption. However, bait is often treated as product for human consumption up until the point of labelling. For example, an operator may process fish heads under their RMP with 10% of these labelled and sold for human consumption, while the remainder, which has gone through identical processing, are deemed bait and labelled as inedible.

Despite being destined for inedible use, bait should be handled and processed in a hygienic manner with as little delay as possible to prevent spoilage and cross contamination.

24.2 Mandatory Requirements

AP Reg 58 Processing must minimise contamination and deterioration

(1) The operator of a risk management programme must ensure that animal material, animal product, and other inputs are processed and handled in a way that manages and minimises their contamination and deterioration.

(2) The operator of a risk management programme must ensure that animal material, animal product, and other inputs are protected from adulteration.

AP Reg 66 Labelling and identification requirements

(1) The operator of a risk management programme must ensure that any labelling or identification clearly relates to the animal material or animal product to which it applies.

(2) The operator of a risk management programme must ensure that any relevant labelling and identification of animal material or animal product is appropriately and accurately amended if the animal material or animal product is no longer fit for its original intended purpose.

PSP Notice C4.2 – Storing animal material and animal product [relevant clauses]

(3) Any animal material not suitable for processing for human consumption, and any animal product not fit for human consumption but fit for some other purpose, must:

a) be stored in a manner that ensures it is separated from, and is not a source of contamination to, animal material or animal product for human consumption; and
b) be kept under controlled conditions until it is adequately identified in a manner that ensures it will not be mistakenly or fraudulently released as suitable for processing or fit for human consumption.

24.3 Procedures

[APA section 17, AP Reg 10, 58]

(1) All seafood products destined for animal consumption must be handled so that it is suitable for further processing or fit for its intended purpose.

(2) Equipment and storage areas used to store or contain material that is not suitable for processing, or product that is not fit for human consumption but is suitable or fit for some other purpose should:

a) be clearly identified; and
b) not be a source of contamination to other material or product that is intended for human consumption.

(3) Fish material or product that is not suitable for processing, or not fit for human consumption but is suitable or fit for some other purpose, should be kept under controlled conditions until it is adequately identified in a manner that will ensure that it will not be mistakenly or fraudulently released as suitable for processing or fit for human consumption. (Also see Part 26)

(4) Material that is to be transferred to a fishmeal plant for processing into product for animal consumption must not be spoilt to such an extent that it becomes unfit for that purpose.

(5) Equipment used to contain or store product for animal consumption must be clearly identified (e.g. by labelling, colour coding), except as allowed for under section 9.3.2(2).

(6) Bins with drainage holes should not be used for storing products for animal consumption unless the bins are located close to a drain, to minimise any contamination of products for human consumption or product contact surfaces.

Guidance

Contamination can be caused by the splash from bins onto seafood products or product contact surfaces.

24.4 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

Guidance

The frequency and type of monitoring will depend on the nature of the operation and the degree of risk if hazards are uncontrolled. Monitoring options include daily checks to ensure that procedures for identifying and managing products intended for animal consumption are carried out correctly.

24.5 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) The records must include:

a) monitoring carried out, problems identified and corrective action taken; and
b) training records of persons involved in key tasks.

Guidance

An example of another record that could be used to demonstrate compliance is traceability records.

Refer to Part 19 for record keeping requirements.

Part 25: Loadout and Transport

25.1 Purpose and Scope

To ensure seafood product is loaded out and transported in a manner that minimises contamination and ensures that it is fit for its intended purpose. This Part covers the transport of fish from the primary processor, and transport between RMPs.

For requirements for transport of BMS from harvest to receipt at the primary processor, refer to Part 13 of the Animal Products Notice: Regulated Control Scheme – Bivalve Molluscan Shellfish for Human Consumption.

25.2 Sources of Hazards

Source	Examples of hazards
Transportation units & loading equipment	Bacterial pathogens (e.g. *E. coli* spp., *Salmonella* spp., *Listeria* spp.) Chemical pollutants (e.g. oil, grease, dust) Physical objects (e.g. metal, plastic)
Personnel	Bacterial pathogens (e.g. *E. coli* spp., *Salmonella* spp., *Staphylococcus aureus*)
Other materials transported in the same vehicle	Bacterial pathogens (e.g. *E. coli* spp., *Salmonella* spp., *Listeria* spp.)

25.3 Mandatory Requirements

AP Reg 138 Good operating practice for transporters (Non-RMP operators)

The transporter of animal material or animal product must ensure that it is transported in a manner that ensures that it—

a) remains suitable for processing or fit for its intended purpose; and
b) meets any requirements specified in a supplementary notice.

PSP Notice Part C5 Transport

PSP Noice C5.1 – Application of Part C5

(1) This Part applies to all animal product businesses that are transporters, whether or not they operate under an RMP.

PSP Notice C5.2 – Requirements for transportation units and loading equipment

(1) Transportation units and loading equipment used by operators operating under an RMP must be designed, constructed, equipped, and operated to:

a) maintain the status of animal material as suitable for processing and animal product as fit for its intended purpose; and
b) minimise hazards and other risk factors; and
c) be cleaned, maintained, and checked.

(2) Transportation units with temperature-control devices must:

a) be designed, constructed, and equipped to ensure that any specified temperatures for animal material or animal product transported in them are maintained throughout transportation; and

b) have a means of monitoring the temperature in the units.

(3) Temperature-measuring devices used in transportation units must be calibrated and located to measure the internal temperature of the units at the warmest point.

PSP Notice C5.3 – Operation of transportation units and loading equipment

(1) Transportation units must be operated in a manner that:

a) minimises the opportunity for contamination or deterioration of animal material or animal product; and
b) maintains any temperature-controlled animal material or animal product within the temperature range required during its transportation; and
c) minimises the opportunity for the substitution or adulteration of animal material or animal product; and
d) minimises the likelihood of any packaging of animal material or animal product being damaged.

(2) The hygiene of transportation units and loading equipment must be such that the opportunity for contamination and deterioration of animal material and product is minimised.

(3) If a transportation unit has been used to transport goods other than animal material or animal product, or animal material or animal product that is not suitable for processing for animal consumption, the unit must be adequately cleaned before it is used to transport animal material or animal product that is intended for human or animal consumption with or without further processing.

PSP Notice C5.4 – Transport operations

(1) The hygiene and behaviour of persons involved in the transport of animal material and product must be such that the contamination and deterioration of animal material and animal product is avoided.

PSP Notice C5.5 – Transport of bulk animal material or animal product for animal consumption

(1) This clause applies to the transport of animal material or animal product (excluding dairy material and dairy product) dispatched from a processor and intended for animal consumption only (see also clause F3.28).

(2) The transporter must ensure that the animal material or animal product is contained and covered in leak-proof containers.

(3) The animal material or animal product must not be transported unless it is denatured, except in the following situations:

a) it is being dispatched to premises that operate under an RMP and it is contained in tamper-evident leakproof containers; or
b) it is minimal risk material derived from fish; or
c) it is being dispatched for rendering and has been derived from any of the following sources:

i) fish or poultry processed for human consumption:
ii) a dual operator butcher, a homekill or recreational catch service provider:
iii) premises operating under the Food Act 2014:
iv) mammals or birds that have died in the field and the animal material is transported directly to a rendering operation:
v) the processing of hides or skins.

(4) The transporter must have a documented procedure for ensuring the identification and security of bulk animal material or animal product that is dispatched in bulk transportation units.

PSP Notice C5.6 – Refrigeration

(1) A transporter must not accept refrigerated animal material or animal product from a primary processor for transportation unless it is at or below the temperature required for it during transportation except as otherwise provided for in:

a) procedures in the processor's RMP; and
b) procedures in the receiver's RMP or in their risk-based measure under the Food Act 2014.

(2) Refrigerated animal material or animal products must be loaded and unloaded without unnecessary delay.

(3) Checking the temperature of any animal material or animal product must be done in a manner that prevents contamination of the animal material or animal product.

(4) If specified temperatures are required to be maintained during transportation, temperatures must be monitored and the records kept.

PSP Notice C5.7 – Contingency plans

(1) Transporters must have a documented contingency plan to manage issues that occur during transportation of animal material or animal product (such as a failure to maintain required temperatures) that may affect the suitability of animal material or the fitness for intended purpose of animal product.

(2) The contingency plan must require the immediate notification of the person who has responsibility for the animal material or animal product.

PSP Notice H2.5 – Chilling and freezing fish for human consumption [relevant clauses]

(2) Before fish (other than live fish) for human consumption that is preserved primarily by refrigeration is released from primary processing premises, it must be reduced to at least a chilled or frozen temperature, validated at its thermal centre (slowest cooling point), as follows:

a) for shucked pāua intended for canning in New Zealand, no warmer than 6°C; and
b) for chilled whole fish, between -1 and 1°C; and
c) for chilled fish product, between -1 and 4°C; and
d) for frozen fish or fish product (including shellfish), no warmer than -18°C; and
e) for brine-frozen fish, no warmer than -9°C.

(3) Subclause (2) does not apply to fish material or fish product that is further processed or transported if:

a) it is transferred:

i) between premises that both operate under RMPs that contain requirements for the transfer of material or products prior to reaching the specified temperatures, so that the relevant risk factors are managed; or
ii) from premises operating under an RMP to premises operating under a registered food control plan under the Food Act 2014, and both the RMP and food control plan contain requirements for the transfer of material or products prior to reaching the specified temperatures, so that the relevant risk factors are managed; and

b) the consigning processor:

i) identifies in their RMP who the fish material or fish product is sent to, and the recipient's RMP or registered food control plan; and
ii) ensures there is no gap in the process documentation as the fish material or fish product is transferred between programmes or plans; and
iii) ensures all relevant programmes or plans are registered before transfer.

(4) For frozen fish or fish product (including shellfish), a brief temperature fluctuation up to a maximum temperature of -15°C is permitted, provided the temperature is reduced to -18°C or colder without unnecessary delay.

(5) For brine frozen fish, a brief temperature fluctuation up to a maximum temperature of -7°C is permitted, provided the temperature is reduced to -9°C or colder without unnecessary delay.

PSP Notice H3.7 – Shucking, processing and packing BMS [relevant clauses]

(8) Chilled shucked shellfish must be reduced to a temperature of 4°C or less before leaving the premises and the temperature must be maintained during transport and storage.

(9) Chilled live shellfish must be reduced to a temperature of 10°C or less before leaving the premises and the temperature must be maintained during transport and storage.

(10) Despite subclause (9), chilled live shellfish may leave the premises when the temperature is greater than 10°C if they are stored at the originating premises for less than 12 hours and are maintained under temperature control at all times while in that premises

Guidance

These clauses allow for minor temperature changes during loading and unloading, short distance trips (e.g. processing premises to a neighbouring cold store) or unforeseen situations (e.g. mechanical breakdown) when a brief temperature increase in the seafood products may occur.

Please note that some export markets may not allow a brief temperature fluctuation of brine frozen fish to -7°C and may only accept brine frozen fish at -9°C or colder. Please check the OMARs for the relevant market.

25.4 Procedures

[APA section 17, AP Reg 10, 138, PSP Notice Part C5]

25.4.1 Loadout checks

(1) Loadout checks on seafood product include ensuring that the:

a) correct labelling is applied (See Part 17 Labelling);
b) product is at the required loadout temperature;
c) transport unit is suitable for loading product (e.g. temperature control, cleanliness); and
d) product is appropriately inventoried.

Guidance

Operators must ensure that the loadout checks required by the Official Assurances Specifications are carried out for export product.

25.4.2 Transport Included in Operator's RMP

(1) RMP operators who use their own vehicles for the transport of seafood products within the scope of their RMP are responsible for complying with the transport requirements.

(2) Procedures for cleaning vehicles and containers used by the operator to transport seafood products must be documented in the RMP. Also, see Part 7 Cleaning and Sanitation.

(3) The operator must ensure that, before loading, the vehicle or shipping container used to transport seafood products is clean and free from odours, chemicals or other residues.

25.4.3 Transport NOT Included in Operator's RMP

(1) Transport operators who provide vehicles for the transport of seafood products under contract to RMP operators are responsible for complying with the transport requirements.

(2) RMP operators should ensure that contracted vehicles used for the transport of seafood products are in a suitable condition to minimise contamination.

(3) Where vehicle and container cleaning is the responsibility of the contracted transporter, the RMP operator should verify the state of cleanliness of each vehicle and of all containers prior to their use.

Guidance

The RMP should have documented procedures describing how the assessment in (3) is carried out. Advice should be provided to staff on how to manage situations where they are confronted with a dirty vehicle or container. This should include information on how to ensure that the vehicle or container is cleaned or sanitised as necessary, at an appropriate site.

Operators who transport seafood products destined for export must also meet relevant export requirements.

25.5 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

Guidance

The frequency and type of monitoring will depend on the nature of the operation and the degree of risk if hazards are uncontrolled. Monitoring options include:

- checks of transport vehicles to confirm they are in a condition that minimises contamination of the seafood products; and
- temperature checks on refrigerated vehicles.

25.6 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures

(2) The records must include:

a) monitoring carried out, problems identified and corrective action taken; and
b) training records for persons involved in key tasks.

(3) Operators must have records to demonstrate compliance with the minimum loadout temperatures in PSP Notice H2.5.

(4) The operator should also have records of:

a) load-in and load-out checks;
b) container/vehicle checks;
c) cleaning checks;
d) CATR checks; and
e) calibration records.

Refer to Part 19 for record keeping requirements.

Part 26: Handling, Disposition and Recall of Non-conforming Product

26.1 Purpose and Scope

To ensure a system is in place for the handling, disposition and recall from distribution or sale, of seafood product that is not fit for its intended purpose.

26.2 Mandatory Requirements

AP Reg 70 Processing non-conforming animal material or animal product

(1) The operator of a risk management programme must ensure that non-conforming animal material that is not suitable for processing or non-conforming animal product that is not fit for its intended purpose is not—

a) used or traded for that purpose; or
b) a source of contamination of other animal material or animal product.

(2) However, the operator may do the following things if in accordance with their risk management programme and any relevant supplementary notice referred to in regulation 71:

a) process the animal material or animal product so that it is fit for its original intended purpose or a different purpose; and
b) then use or trade it.

AP Reg 105 Recall procedures [relevant clauses]

(1) An operator that this Part applies to must—

a) have in place recall procedures for animal material and animal product that—

i) include criteria for deciding when a recall will be made; and
ii) set out how retrieval and reprocessing or disposal of the animal material and animal product will be managed; and
iii) comply with any requirements in supplementary notices; and

b) recall animal material and animal product in accordance with those procedures.

AP Reg 106 Providing details of recall

(1) If an operator that this Part applies to decides to recall animal material or animal product, the operator must notify the Director-General or an animal product officer as soon as practicable, but no later than 24 hours after making the decision.

(2) The operator must also provide the Director-General or animal product officer with the following details within 24 hours after the recall:

a) the animal material or animal product affected by the recall:
b) the reason for the recall:
c) any information required by a supplementary notice.

(3) The operator must provide the information required under subclause (2) in a readily accessible format.

AP Reg 107 Simulated recall to demonstrate procedures effective [relevant clauses]

(1) An operator that this Part applies to must carry out a simulated recall of animal material and animal product using their traceability and recall procedures.

(2) The simulation must demonstrate the effectiveness of the operator's traceability and recall procedures.

(3) In this Part, effectiveness is measured by—

a) the proportion of animal material or animal product that would have been or was successfully recalled; and
b) the time taken to trace and recall affected animal material or animal product; and
c) matters specified in a supplementary notice.

AP Reg 108 Frequency of simulated recall

An operator that this Part applies to must carry out a simulated recall referred to in regulation 107 at least every 12 months—

a) after a simulated recall; or
b) after a genuine recall, if the recall demonstrated the traceability and recall procedures to be effective.

PSP Notice C6.2 – Managing animal material and animal product that may be non-conforming

(1) Animal material and animal product that may be non-conforming (which, in relation to red meat, includes suspect animal material) must be managed under clause C6.3 as non-conforming animal material or animal product unless or until a suitably skilled person determines that it is not non-conforming.

(2) The operator of an animal product business must have procedures for how a suitably skilled person determines whether animal material or animal product that may be non-conforming is in fact conforming animal material or animal product.

(3) This clause applies in addition to any specific provisions elsewhere in this Notice about the management and disposition of animal material or animal product that may be non-conforming; and in case of a conflict, the other provision prevails.

PSP Notice C6.3 – Managing non-conforming animal material or animal product [relevant clauses]

(1) The operator of an animal product business must have procedures for managing non-conforming animal material and animal product.

(2) Procedures for managing non-conforming animal material or animal product must, at a minimum:

a) require that the management and disposition of the animal material or animal product is managed by a suitably skilled person; and
b) specify how the non-conforming animal material or animal product is identified and managed so as to:

i) avoid contaminating other animal material, animal products, or inputs; and
ii) ensure it is not mistaken for, or released as, conforming animal material or animal product; and

c) identify the options for disposing of the animal material or animal product (such as reprocessing, downgrading, or disposing of it as waste), and the requirements for deciding which option to use in any particular situation; and
d) state what records must be kept, which must include, at a minimum, records:

i) identifying the affected animal material or animal product; and
ii) describing the event or circumstance that led to it being non-conforming; and
iii) about its disposal, which must include confirmation of actual disposal; and

e) ensure the traceability of the non-conforming animal material or animal product.

26.3 Procedures

[APA section 17, AP Reg 10, 37, 70, 105-108, PSP Notice Part C6.2-6.3]

(1) Non-conforming product (e.g. spoiled, deteriorated or contaminated) must be handled and stored in a manner that prevents contamination and deterioration of other products, and contamination of the storage environment. Product must be:

a) clearly identified, segregated from other products; and
b) assessed by a suitably skilled person for appropriate disposition.

(2) Operators must designate a person to take overall responsibility for any recall and allocate recall tasks to appropriately skilled people.

(3) Procedures for carrying out a traceability and recall simulation exercise, sometimes referred to as a "mock recall" must be included in the recall procedure.

(4) A mock recall must be carried out at least every 12 months, unless an effective recall was carried out during that time, and the procedures reviewed based on the findings from the exercise.

Guidance

It is important that operators are well prepared to deal with a recall. Often key people are not available when needed. The recall procedures need to be robust and contact lists up-to-date. Sufficient staff should be trained to deal with a recall. The person with overall responsibility for a recall may be the Day-to-day Manager of the RMP or a person at a senior level of responsibility within the operation.

For more detailed information on establishing and implementing recall procedures refer:
- the Recalls section of the RMP Manual;
- MPI's Recall Guidance Material.

If exporting, you are required to notify the Director-General as soon as possible, and no later than 24 hours after certain export non-conformance events (or first knowledge of the event). For more information see Export non-conformance on the MPI website.

(5) After a recall, the procedure should be reviewed and, if necessary, updated.

26.4 Monitoring

[APA section 17, AP Reg 10]

(1) The operator must carry out regular checks on the effectiveness of, and compliance with documented procedures.

26.5 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept demonstrating compliance with documented procedures.

(2) The records must include:

a) monitoring carried out, problems identified and corrective action taken;
b) recall records, including mock recall records;
c) traceability records;
d) incident reports, records of assessment and disposition of non-complying product;
e) records of any notifications to your verifier, animal products officer or the DG; and
f) training records for persons involved in key tasks.

Refer to Part 19 for record keeping requirements.

Part 27: Management of *Listeria monocytogenes* in Ready-To-Eat (RTE) Seafood Products

27.1 Purpose and Scope

(1) This Part describes how to meet the requirements for managing *Listeria monocytogenes (L. monocytogenes*) in RTE seafood as prescribed in:

a) Standard 1.6.1 of the FSC; and
b) Part L3 of the PSP Notice.

Guidance

If processing frozen RTE product or frozen heat shocked BMS, for export, it has been agreed with industry that all the relevant requirements in this Part will be implemented.

27.2 Mandatory Requirements

FSC Standard 1.6.1

Ready-to-eat food in which growth of *Listeria monocytogenes* can occur
Listeria monocytogenes n = 5, c = 0, m = not detected in 25g

Ready-to-eat food in which growth of *Listeria monocytogenes* will not occur
Listeria monocytogenes n = 5, c = 0, m = 100cfu/g

1.6.1— 4 Food in which growth of *Listeria* monocytogenes will not occur

(1) For the purposes of the table to section S27— 4, growth of *Listeria monocytogenes* will not occur in a ready-to-eat food if:

a) the food has a pH less than 4.4 regardless of water activity; or
b) the food has a water activity less than 0.92 regardless of pH; or
c) the food has a pH less than 5.0 in combination with a water activity of less than 0.94; or
d) the food has a refrigerated shelf life no greater than 5 days; or
e) the food is frozen (including foods consumed frozen and those intended to be thawed immediately before consumption); or
f) it can be validated that the level of *Listeria monocytogenes* will not increase by greater than 0.5 log cfu/g over the food's stated shelf life.

(2) For the purposes of the table to section S27— 4, a ready-to-eat food that does not receive a listericidal process during manufacture is taken to be a food in which growth of *Listeria monocytogenes* will not occur if the level of *Listeria monocytogenes* will not exceed 100 cfu/g within the food's expected shelf life.

(3) For the purposes of subclause (2), a ready-to-eat food that does not receive a listericidal process during manufacture is taken to include:

a) ready-to-eat processed finfish; and
b) fresh cut and packaged horticultural produce.

L3.2 – Definitions

(1) In this Part:

high-care area means any area used for processing ready-to-eat animal product after a listericidal process

but while there is still potential for it to be contaminated by *L. monocytogenes*, whether after a critical control point for L. monocytogenes or after the final microbiological hurdle has been applied

L. monocytogenes means *Listeria monocytogenes*

listericidal process means a process (eg, heat treatment or high-pressure processing) that reduces counts of *L. monocytogenes* to a safe level

product contact surface means a surface in a high-care area that ready-to-eat animal product comes in contact with before it is packaged

ready-to-eat animal product means only the kind of ready-to-eat animal product to which this Part applies (i.e., as identified in clause L3.1(1))

vulnerable population means a population comprising children under 5 years of age, people over 65 years of age, pregnant women, or people with compromised immune systems.

PSP Notice L3.3 – *Listeria* management procedures

(1) A processor of ready-to-eat animal product must have procedures for the management and control of *L. monocytogenes* in the premises covered by the RMP.

(2) The procedures must include:

a) the name or position of each person responsible for developing and implementing the procedures for *L. monocytogenes* management; and
b) a description of the product covered by the *L. monocytogenes* management procedures; and
c) a description of the transmission routes for *L. monocytogenes* into and within the processing areas; and
d) a description of or reference to the specific control measures within the product, the process itself, and the good operating practices that control *L. monocytogenes*; and
e) an environmental testing procedure that:

i) proactively looks for *L. monocytogenes* to minimise the likelihood of *L. monocytogenes* contaminating product; and
ii) confirms that any controls for *L. monocytogenes* are effective; and

f) a product testing procedure to confirm that any controls for *L. monocytogenes* set out in the RMP are effective.

(3) Despite subclause (2)(f), a product testing procedure is not required in relation to ready-to-eat animal products that have:

a) a shelf life of 5 days or fewer; or
b) a pH of less than 4.4; or
c) a water activity (aw) of less than 0.92; or
d) a combination of pH less than 5 and aw less than 0.94; or
e) been validated that the level of *L. monocytogenes* will not increase by more than 0.5 log colony forming units per gram over the product's stated shelf life.

(4) Despite subclause (2)(e) and (f), a retail butcher (including a dual operator butcher) who sells ready-to-eat animal products by wholesale need not have procedures for environmental testing or product testing (as described in clause L3.4), unless they wholesale those products specifically to or for vulnerable populations.

PSP Notice L3.4 – Environmental testing and product testing procedures

(1) Environmental testing procedures referred to in clause L3.3(2) must include:

a) a site plan or other means of identifying each high-care area where ready-to-eat animal product is processed; and
b) identification of the sampling sites in the high-care area (including product contact surface sampling sites and non-product contact surface sampling sites) that specifically target areas that are most likely to be contaminated.

(2) Both the environmental testing procedure and product testing procedure referred to in clause L3.3(2) must include:

a) the number of samples to be taken during each sampling period and when each sampling period will occur; and
b) the names or designations of personnel responsible for carrying out sampling; and
c) procedures for sampling, sample handling and sample delivery to the laboratory; and
d) procedures for communicating with the laboratory, including:

i) the key contact at the laboratory; and
ii) whom the laboratory will immediately notify of a detection of Listeria species or *L. monocytogenes*; and

e) a system for recording and reporting laboratory results in a way that allows for easy review of the results; and
f) an action plan that will be implemented immediately in the event of a detection of *L. monocytogenes* in environmental samples or product samples.

(3) An action plan referred to in subclause (2)(f) must include:

a) the name or designation of the person who will be responsible for managing the actions to be taken; and
b) procedures for:

i) immediately notifying the verifier if *L. monocytogenes* is detected in product or on product contact surfaces; and
ii) actions to be taken to help identify the source of the detection and any affected product; and
iii) managing any affected product, including product disposition; and
iv) taking corrective actions and confirming that the actions were effective; and
v) review and reporting on the actions taken; and
vi) the consideration of actions to prevent recurrence.

(4) The processor must regularly review the procedures, and do so:

a) at least annually; and
b) in response to any matter or event that could affect the effectiveness of the controls for L. monocytogenes, including but not limited to:

i) a product; or
ii) a process; or
iii) the premises, facilities or equipment; or
iv) the RMP; or
v) the person with responsibility for *L. monocytogenes* management; or
vi) after the detection of *L. monocytogenes* on product contact surface samples or in product.

PSP Notice L3.5 – Laboratory testing

(1) A recognised laboratory with the required tests in the laboratory's scope of recognition must be used for all tests done for the purpose of this Part.

PSP Notice L3.6 – Competencies of personnel

(1) The processor must ensure that:

a) the person responsible for designing and implementing the requirements for *L. monocytogenes* management within the premises, has knowledge of:

i) *L. monocytogenes*: the illness it causes, sources of contamination, harbourage sites and transmission routes; and
ii) the specific control measures that eliminate, prevent or reduce the likelihood of *L. monocytogenes* contamination during processing, distribution, storage and use; and
iii) how to develop and implement an environmental and product testing procedures if required; and
iv) how to analyse and review test results, if any testing is undertaken; and
v) the actions to be taken following a detection of *Listeria* or *L. monocytogenes*.

b) personnel involved in processing ready-to-eat animal product or entering areas used to process ready-to-eat animal product, including shift managers, process workers, cleaners, engineers and maintenance staff, have an understanding that is appropriate to their roles of:

i) the risks to the operation and consumers of *L. monocytogenes*; and
ii) *L. monocytogenes*: the illness it causes, sources of contamination, harbourage sites and transmission routes; and
iii) the specific procedures for the roles, tasks, or control measures for which they are responsible.

c) sampling, if required, is undertaken by a person who has received appropriate training, including in the identification of sampling sites, and how and when samples may be composited.

(2) Designing and implementing the requirements for *L. monocytogenes* management within the premises is a key task, for the purposes of Regulations 19 to 21.

27.3 Procedures

27.3.1 Application

Guidance

Summary of legal requirements
Standard 1.6.1 of the FSC requires RTE product to meet a microbiological limit for *L. monocytogenes* at the end of its shelf life. The applicable limit, selected by the operator for each product will depend on whether the product will support the growth of *L. monocytogenes*:

- products in which growth will not occur, have a limit of up to 100 cfu/g in the product;
- products in which growth may occur, have a limit of absence in 25 g (0cfu/25g).

Part L3 of the PSP Notice requires procedures for the management of *Listeria*, and testing procedures for the environment and/or product.

The FSC standard applies to broader range products than the PSP Notice. For example, the PSP Notice applies only to chilled RTE animal products, whereas the FSC also applies to frozen RTE products. It has, however been agreed with industry that operators processing frozen RTE products or frozen heat shocked BMS that are to be exported will meet the requirements in this Part.

Table 8 has been developed to help you determine which requirements to comply with. Table 8 also indicates whether the following testing is needed:

- **product testing** (PT) to demonstrate compliance with standard 1.6.1 of the FSC;
- **an environmental testing procedure** (ETP) to meet the requirements of the PSP Notice; and/or
- **a product testing procedure** (PTP) to meet the requirements of the PSP Notice.

The following products do not need to meet the requirements in this Part:

- raw fish or live shellfish (including finfish, crustaceans, echinoderms, cephalopods and BMS), unless it is packed retail ready RTE product;
- commercially sterilised products (retorted or aseptically processed);
- products that receive a validated *L. monocytogenes* control step in the final pack, e.g. products that are heat treated or subject to high pressure processing in the package;
- products that contain a listericidal component that has been validated to ensure the rapid inactivation of *L. monocytogenes* if the product is recontaminated (e.g. marinated mussels).

Table 8: Which requirements do I need to comply with?

Product category	Need to comply with FSC 1.6.1?	Need to comply with the PSP Notice?	Does the product support growth of *L. monocytogenes*? Yes/No	What testing is needed?	Section reference in this Part
Live BMS	No	No	Not relevant	None	-
Chilled raw fish	No	No	Not relevant	None	-
Chilled raw RTE seafood e.g. pottled oysters, kina, retail ready RTE fish, ½ shell oysters	Yes	No	Yes if shelf life is more than 5 days	PT	27.5
			No if shelf life is 5 days or less	PT	27.5
Chilled processed RTE seafood e.g. hot or cold smoked fin-fish, shellfish, eels, crabs or rock lobster.	Yes	Yes	Yes if: • shelf life is more than 5 days; and • pH ≥ 4.4; or • Water activity (a_w) ≥ 0.92; or • pH ≥ 5 and a_w ≥ 0.94; or • there is more than a 0.5 log cfu/g increase in *L. monocytogenes* over shelf life.	PT ETP PTP	27.5 27.6.1 27.6.2
			No if shelf life is 5 days or less	PT ETP	27.5 27.6.1
Chilled marinated RTE seafood e.g. BMS, squid Shelf life more than 5 days	Yes	Yes	Yes if pH ≥ 4.4	PT ETP PTP	27.5 27.6.1 27.6.2
			No if pH < 4.4	PT ETP	27.5 27.6.1
RTE seafood with a_w less than 0.92 Shelf life more than 5 days	Yes	Yes	No	PT ETP	27.5 27.6.1
Chilled or frozen processed RTE seafood with validated in-pack listericidal step	No	No	Not relevant	None	-
Frozen raw seafood	No	No	Not relevant	None	-
Frozen RTE seafood	Yes	No	No	PT	27.5

including seafood that is thawed immediately before consumption not exported					
Frozen RTE seafood for export[9] e.g. frozen hot or cold smoked salmon	Yes	No	No	PT ETP PTP	27.5 27.6.3 27.6.3
Frozen heat shocked BMS for export[9]	No	No	No	ETP PTP	27.6.3 27.6.3

If processing chilled raw RTE seafood (e.g. raw oysters), or frozen RTE product that is thawed and stored for a period of time prior to consumption, you should also consider implementing the *Listeria* management procedures in the PSP Notice-. It may also be appropriate to manage seafood products that are intended to be fully cooked prior to consumption as RTE, if they appear to be or could be mistaken as RTE.

Marinated products such as mussels, squid and octopus will need to be assessed on a case by case basis to determine whether they can be excluded from Part L3 of the PSP Notice-. To be excluded, an operator would need to validate that the product contains a listericidal component (ingredient) that ensures the rapid inactivation of *L. monocytogenes* if the product is recontaminated. See Appendix 6: Validation of listericidal process after being sealed in final packaging (marinated products) for more detail.

Meaning of "specified limit" in this Part
The term "specified limit" has been used throughout Part 27 to mean the microbiological limit(s) for *L. monocytogenes* that has been documented in the RMP by the operator for each product or product group (i.e. either 0cfu/25g, or 100cfu/g).

In relation to environmental monitoring, the specified limit is "no detection of *L. monocytogenes".*

27.4 *Listeria* Management Procedures

(1) Operators in Table 8 that are required to meet the FSC and Part L3 of the PSP Notice- and processors of frozen RTE seafood must have written procedures for the management of *Listeria*.

(2) The procedures must address the elements required by Part L3 of the PSP Notice-, and include:

a) procedures for environmental testing;
b) procedures for product testing (including testing for compliance with standard 1.6.1 of the FSC), where required; and
c) procedures that will be followed if presumptive *Listeria* or *L. monocytogenes* is detected in product or the environment, including:

i) the name(s) or designation(s) of the personnel responsible for managing the actions to be taken; and
ii) the action plan that will be immediately implemented.

(3) People who design and implement the *Listeria* management procedures must have good knowledge of the matters listed in L3.6(1) of the PSP Notice, and as this is designated a "key task", must meet the requirements for key tasks. These may be different people. (See Part 12)

[9] In this Part, frozen RTE seafood for export and frozen heat shocked BMS for export will be referred to as frozen RTE seafood. If the BMS is to be traded as RTE, the heat shock step would need to be validated as a listericidal process, and the BMS would then be considered frozen RTE seafood (domestic or export, as appropriate).

(4) Staff who enter areas used to process RTE products (including engineers, maintenance staff and cleaners) must have an understanding of *Listeria* management that is appropriate to their role. [PSP Notice L3.6(2)]

Guidance

Staff who manage *Listeria* at the premises should have a senior role in the business or report directly to senior management. The MPI *Listeria* guides provide detailed information about the management of *Listeria.* Responsible staff should be familiar with "Guidance for the control of *L. monocytogenes* in ready-to-eat foods":

- Part 1: *Listeria* Management and Glossary
- Part 2: Good Operating Practices
- Part 3: Monitoring activities
- Part 4: Corrective Actions

MPI has also developed a series of fact sheets to help you train your staff. The factsheets provide information about *Listeria* and key GOP for its management and control:

- *Listeria monocytogenes* and ready-to-eat foods
- *Listeria* control measures
- Cleaning and sanitising
- Environmental testing for *Listeria*
- Testing product for *Listeria monocytogenes*

A number of NZQA unit standards are also available that address *Listeria* management.

(5) Samplers must be identified by name or position [PSP Notice L3.4].

(6) Samplers must be trained by a suitably skilled person in the following areas [PSP Notice L3.6]:

a) identifying and selecting suitable environmental sampling sites and possible sources of contamination in accordance with the sampling plan;
b) the correct techniques for taking samples;
c) the correct method for completing the sample submission form;
d) the correct method for the storage and dispatch of samples to the laboratory;
e) the significance of following correct procedures;
f) understanding how and when to composite samples.

(7) A sufficient number of staff should be trained to cover all times the premises is operating (e.g. shifts and annual leave).

Guidance

The MPI video "Swabbing for *Listeria* – YouTube" can assist with environmental testing. The video instructs on how to collect environmental samples from processing areas.

(8) Training records must be kept.

(9) The recognised laboratory must be accredited to ISO/IEC 17025, with the required tests within the scope of their recognition.

(10) The procedures must include the key contact at the laboratory, and the person at the premises who the laboratory will notify if presumptive *Listeria* or *L. monocytogenes* is detected.

(11) The operator should have a written agreement with the laboratory:

a) to receive email, text or telephone notification if any presumptive (i.e. unconfirmed) and confirmed *L. monocytogenes* is detected, as soon as the results are known; and
b) for receipt of the laboratory report of the results.

(12) The procedures must include how:

a) the recognised verifier will immediately be notified if *L. monocytogenes* is detected in product or on product contact surfaces; and
b) the notification will be followed up in writing as soon as practicable.

(13) The requirement to notify *L. monocytogenes* results as described in section 27.4(12) applies not only to the testing required by this Part, but also to any results from additional environmental monitoring of zone 4 or product testing (of product covered by the scope of this Part) that the operator has elected to carry out.

(14) The procedures must be regularly reviewed and updated as necessary.

Guidance

The following sections describe the minimum recommended sampling plans for *L. monocytogenes*. They apply to the product categories identified in Table 8 that require product testing (PT), an environmental testing procedure (ETP), and/or a product testing procedure (PTP).

27.5 Product Testing of Chilled or Frozen Product to meet the FSC

(1) The regulatory limit for *L. monocytogenes* for each product or product category must be documented in the RMP.

(2) If growth of *L. monocytogenes* will not occur in the product and a regulatory limit of 100cfu/g is selected, the operator must have evidence to demonstrate that the limit will not be exceeded at the end of the product's shelf life. [FSC]

Guidance

Frozen RTE products (including products that are consumed frozen and those that are intended to be thawed immediately before consumption) are considered to be foods in which growth of *L. monocytogenes* will not occur under the FSC. These products can have a limit of up to 100cfu/g at the end of shelf life.

If a limit of 100cfu/g *L. monocytogenes* at the end of shelf life is applied, a lower limit is usually set at the end of processing (for example, 10cfu/g). Using this as a starting point, you would then validate that the regulatory limit of 100 cfu/g would not be exceeded at the end of shelf life. Also, see Appendix 5 Validation that 100cfu/g *L. monocytogenes* is met at the end of shelf life.

You also need to consider whether the product will be thawed and held for a length of time before retail or consumption when setting limits for *L. monocytogenes.* The impact of this should be assessed during validation.

MPI has developed a fact sheet "Microbiological Limits for *L. monocytogenes* in RTE foods" to help explain when validation of no growth may be needed and what it may involve.

If product is intended for export, this may require that a regulatory limit of absence in 25g (0cfu/25g) be applied.

(3) Testing product with a shelf life of 5 days or less is only required to verify compliance with the limits in the FSC.

(4) The product testing (PT) sampling plan is specified in Table 9. Product should be tested at the end of the shelf life.

Table 9: Product testing (PT) sampling plan for chilled or frozen product

Sample type	Minimum Frequency	Test

Each product in its final form (FSC standard 1.6.1)	Minimum of five samples from a batch annually or seasonally	Composite or individual depending on whether enumeration is required.

27.6 Environmental and Product Testing Procedures [PSP Notice L3.4]

Guidance

When describing sites for monitoring *L. monocytogenes* in a premise, the terms "zones" or "hygiene areas" are often used interchangeably. The following table describes how the terms "zones" and "hygiene areas" are applied.

Table 10: Description of Zones

Zone	Description
1	Sampling sites in the **low hygiene environment** non-processing environment (outside).
2	Sampling sites in the **standard hygiene environment** accessed by processing staff in personal protective clothing and equipment.
3	Sampling sites on non-product contact surfaces in the **high-care area**. The high-care area is any area used for processing exposed RTE product after a listercidal process, whether after a CCP for *L. monocytogenes* or after the final microbiological hurdle has been applied.
4	Sampling sites on **product contact surfaces and surfaces** from which product (including ingredients) can be contaminated **in the high-care area**.

Zone 1 testing is carried out at your discretion and is usually only performed for investigative purposes during an incident when seeking to identify the source of contamination.

(1) A person with the competencies described in PSP Notice L3.6 and section 27.4 (2) must design and implement an appropriate ETP, and where required a PTP.

(2) The ETP sampling plan must include:

a) a site plan or other means to identify the sampling sites. Sampling sites must be selected in various zones (2-4) with the aim of finding *L. monocytogenes*.
b) when each sampling period will occur and where useful the sampling dates;
c) the number of environmental samples to be taken at each sampling period; and

(3) The PTP sampling plan must include the number of product samples and a description of each product sample to be taken for each sampling period.

(4) The ETP and PTP sampling plans specified in this Part are to be applied unless an alternative is documented in the RMP.

(5) Alternative sampling plans should be set within the context of the risk based procedures based on HACCP, the nature of the product and processing environment.

27.6.1 ETP sampling plan for chilled RTE product

(1) The environmental sampling plan for operators processing chilled RTE product, with the exception of intermittent processors, is specified in Table 11.

Table 11: ETP sampling plan for chilled RTE products

Zone	Minimum Frequency[10]	Test[11]
2, 3 or 4	Five sites from each zone per fortnight	Composite or individual

27.6.2 PTP sampling plan for chilled RTE product

(1) The product sampling plan for chilled RTE product with a shelf life of 6 days or more is specified in Table 12.

Table 12: PTP sampling plan for chilled RTE products with a shelf life of 6 days or more

Sample Type	Minimum Frequency[12]	Test
Each product in its final form	Five samples from one batch per fortnight	Composite or individual

(2) All chilled RTE product processed at the same time as the zone 4 sampling and product sampling should be **on hold** under the control of the operator until the results of the sampling is received.

27.6.3 ETP and PTP sampling plans for frozen RTE product

(1) The sampling plan for frozen RTE product, with the exception of intermittent processors, is specified in Table 13.

Table 13: ETP and PTP sampling plan for frozen RTE products

Sample type	Minimum Frequency	Test[13]
Zones 2 and 3	Five sites per fortnight	Composite or individual
Zone 4	Five sites per week	Composite or Individual
Each product in its final form	Five samples per fortnight[14]	Composite or individual

(2) All frozen RTE product processed between the scheduled samplings of the zone 4 is to be **on hold** under the control of the operator until the results of the sampling is received.

27.6.4 Intermittent processors of chilled or frozen RTE product

(1) Operators intermittently processing chilled or frozen RTE product may document an alternative sampling plan in their RMP. (See 27.6(4)).

27.6.5 General sampling requirements

(1) Sampling must be planned and conducted in a manner that potential contamination is not transferred by the person performing the sampling or by the introduction of another contaminant. [AP Reg 64]

[10] All samples taken from the zone 2, 3, 4 and product from the same batch being processed when the samples were taken.

[11] A number of swabs may be taken from the same site or zone and can be analysed as a single or composite from one site.

[12] All samples taken from the zone 2, 3, 4 and product from the same batch being processed when the samples were taken.

[13] A number of swabs may be taken from the same site or zone and can be analysed as a single or composite from one site.

[14] Fortnightly testing of product should be carried out on the same batch being processed while the zone 4 samples are taken to ensure that reliable information is obtained.

(2) All samples should be taken aseptically.

Guidance

A suitable aseptic sampling technique for taking environmental swabs is using large gauze swabs and metal forceps. This ensures that sufficient pressure can be applied to remove contaminants that may adhere very tightly to surfaces. This technique is particularly useful for getting into cracks and crevices that may harbour *L. monocytogenes*. Another aseptic sampling technique is to use a large gauze swab and a gloved hand to provide sufficient consistent pressure to remove contaminants.

(3) The requirement for five environmental swabs from zone 4 cannot be split between different product lines where these are distinct and separate.

Guidance

Where there are multiple process lines operating in the same zone, each process line should be subject to environmental monitoring on the designated sample day if in operation. All products processed in the zone on the day of sampling will be subject to corrective action where *L. monocytogenes* is detected on any particular line unless it can be demonstrated that each line is separate and distinct.

(4) The requirement for five product samples cannot be split between different product types if these are processed on different and distinct process lines.

Guidance

Where there are multiple RTE product types processed on any one process line, only one product type needs to be sampled (i.e. these can be considered the same batch), however all products processed on this line on the day of sampling will be subject to corrective action if *L. monocytogenes* is detected in the product.

This would be the case if they are processed between major clean downs and subject to the same conditions, i.e. hot smoked eel and hot smoked salmon, and heat shocked half-shell mussels and mussel meat where they are processed on the same line. However, hot smoked salmon is different to cold smoked salmon due to the different times and temperatures during smoking and an individual sampling procedure should run for each.

(5) Where the operator processes on a shift basis, all shifts must be covered by the *Listeria* management procedures, at the frequencies stated previously, i.e. there should be the opportunity to take samples from each shift.

Guidance

If processing on a shift basis with a major clean down between each shift, then each shift is considered to be distinct and the product processed is a different batch. In that case each shift, e.g. day and evening, should each be subject to the requirements for sampling. Considering each shift on an individual basis may have advantages in terms of reduced commercial risk in the case of the detection of *L. monocytogenes*.

If there is a single major clean down per working day, then all products processed over the shifts on the same working day are considered to be part of the same batch and corrective actions in the event of the detection of *L. monocytogenes* will apply to products from all shifts.

27.6.6 Environmental sampling

(1) Samples should be taken at random times during processing to cover different times during the processing day and different shifts.

(2) Surfaces should not be cleaned or sanitised immediately prior to sampling. Environmental samples should be taken once processing is underway and equipment has had an opportunity to 'warm up' (e.g. after 1-3 hours) of operation and should not occur during a work break.

(3) Where there are designated sampling sites, all of the sampling sites selected should be sampled on a regular rotational basis with the flexibility to sample additional sites depending on the circumstances, e.g. past results, maintenance, construction, or when new or modified equipment is installed.

(4) The selection of sampling sites should be reviewed regularly, based on the trend analysis of past results, process conditions, or as part of investigative sampling.

Guidance

Any sampling to check the effectiveness of the cleaning and sanitation procedure e.g. as part of the pre-operational checks, is in addition to this procedure-.

27.6.7 Product sampling

(1) Five 25 g samples of each type of product should be randomly selected from a batch just prior to packing or in its final packaging, depending on the process and product.

27.6.8 Composite samples

Guidance

Compositing samples for analysis may be a more cost effective option compared with analysing individual swabs and product samples. If analysis of composite samples is required, you should check with your recognised laboratory to confirm that the analytical method used is appropriate and that the sensitivity is not compromised.

Product samples
When demonstrating compliance with the regulatory limit, e.g. absence of *L. monocytogenes/* 25g (where n=5, c=0), instead of the laboratory testing, five product samples of 25g, one combined sample of 125g is required.

The microbiological limit for *L. monocytogenes* is specified for a particular product sample weight, usually 25g. However, this does not always correlate to the size of the sample analysed. Therefore it is important to check with your recognised laboratory to determine the amount of product required for analysis to avoid sending insufficient product samples.

Product samples cannot be composited if *L. monocytogenes* is to be enumerated (e.g. if the product has a limit of 100cfu/g).

Compositing of product samples for presence or absence
Individual samples may form a composite sample for laboratory analysis. For example:
- Five individual samples of 25g may form one composite sample of 125g;
- Ten individual samples of 25g may form two composite samples, e.g. 2 x 125g;
- Twenty individual samples of 25g may form four composite samples, e.g. 4 x 125g;
- Thirty individual samples of 25g may form six composite samples, e.g. 6 x 125g; or
- Sixty individual samples of 25g may form 12 composite samples, e.g. 12 x 125g.
- In all these cases, the laboratory results should report presence or absence of *L. monocytogenes* in a 125g sample.

There are two options for composite sampling of product when large sample numbers are being analysed. For example, sample size n=60.

- The unopened packages of product may be submitted to the laboratory where they will be aseptically opened and a 25g sample is taken from each. These will form the composite sample that will be tested; the composite sample is not more than five 25g samples (125g).
- The unopened packages (including large cartons) of product are aseptically opened by the operator and a 25g sample taken from each. Precautions are to be taken to prevent contamination of the sample. These individual samples will form a composite sample which will be tested; the composite is not more than five 25g samples (125g).

Environmental samples
Environmental swabs taken from the same zone at the same time can be composited during routine monitoring. However, if *L. monocytogenes* is detected in a composite environmental sample it generally takes longer to identify the source of contamination, as individual swabs will need to be tested to identify the root cause.

Compositing environmental samples from different sites in the same zone is not appropriate during investigative or exploratory sampling when *L. monocytogenes* has been detected. However, it is acceptable in those cases to composite samples from a single piece of equipment, e.g. water bath or trolley.

See Appendix 1 for more information about compositing samples.

27.6.9 Transportation

(1) Product samples must be transported to the laboratory under refrigeration or in a transport medium that maintains the preservation state and integrity of product (i.e. properly packed in a cool box with ice packs). Frozen product is to remain frozen whilst chilled product is to remain chilled.

Guidance
Product samples may be sent to the laboratory in the following forms e.g.:
- in an intact food grade plastic bag, such as those used for routine packaging; or
- in another suitable container; or
- as individual consumer packs.

(2) Environmental swabs are to be transported to the laboratory using a method that ensures that the samples remain chilled.

(3) All product samples and environmental swabs should be sent to the laboratory as soon as practical.

Guidance

Because environmental swabs provide a snapshot of what was happening at a particular time, it is preferable that they are tested promptly when received by the laboratory. It is important that any bacteria that may be present, including *L. monocytogenes*, are not altered due to transportation.

Where possible, samples should arrive at the laboratory within 48 hours following collection. This time allowance is important as it should allow for samples to be taken randomly throughout the day, rather than soon after the first 2-3 hours of processing, and so provide greater opportunity to cover more process times and shifts.

27.7 Results

(1) All results (including results of any samples taken in addition to the requirements of this Part) must be reviewed on receipt and appropriate actions taken.

(2) All laboratory results should be reviewed and analysed on at least a six weekly basis to identify any trends and corrective actions.

Guidance

One way to facilitate trend analysis is to set up a table that records sampling sites, date of sampling and laboratory results for presumptive *Listeria* and *L. monocytogenes*. Another way to identify trends, problems and sources of contamination is to record presumptive *Listeria* and *L. monocytogenes* results on a schematic diagram (flowchart) of the operation as this builds up a picture of where problems exist.

27.8 Actions in the Event of Detection

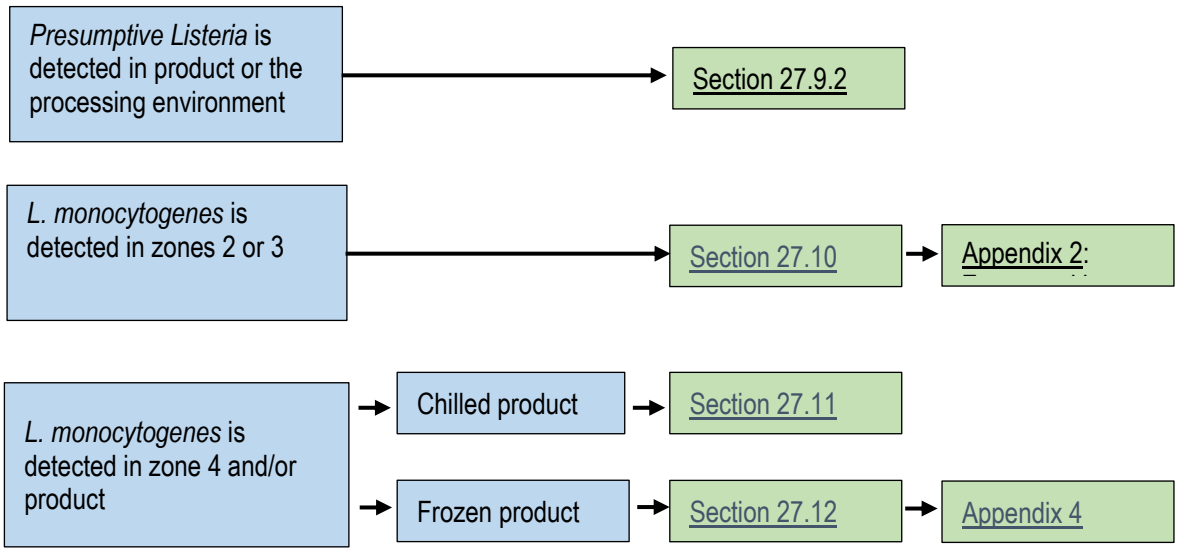
Figure 3 shows the sections to refer to for actions when presumptive *Listeria* and/or *L. monocytogenes* is detected in the product or processing environment.

(1) When managing an incident, you should be able to justify any decisions made and must keep records of all decisions and actions taken.

Guidance

Refer to Part 4 Corrective Actions of the *Listeria* guides for more information.

Figure 3: Section references for actions when presumptive *Listeria* or *L. monocytogenes* is detected



27.9 Presumptive *Listeria* Detection in Chilled or Frozen RTE Product or Environment

27.9.1 Summary

(1) The following actions should be taken when a presumptive *Listeria* result is received in chilled or frozen RTE product (including heat shocked mussels) and/or in the processing environment. That is, a presumptive positive for *Listeria* has been identified, but it may take another 24-48 hours before a confirmed result of the detection or non-detection of *L. monocytogenes* is available.

Guidance

When the PCR method is used to test for *L. monocytogenes*, you will need to determine whether only viable cells are detected. In the case of positive PCR results, a culture method is usually used to confirm whether the cells are viable.

Early notification of presumptive *Listeria* allows you to take immediate action while waiting for the confirmed result. This may provide an indication of a breakdown of controls and indicates that environmental conditions may be suitable for the harbourage, survival and/or growth of other *Listeria* spp. including *L. monocytogenes*.

The requirements in relation to product in the following sections do not apply to product with a shelf life of 5 days or less.

27.9.2 Presumptive *Listeria* but identification of species not confirmed

(1) Within one working day of receiving the laboratory notification of the detection of presumptive *Listeria* in zones 3-4 and/or the product, the operator should carry out the actions in Table 14.

Table 14: Actions when presumptive *Listeria* is detected but species is not confirmed

Action	Review of results and trend analysis	*Listeria* controls review and corrective actions
Conduct an initial investigation to determine the source of presumptive *Listeria.* Include samples from the same sampling sites and from the surrounding area, i.e. spatial sampling to determine the source of contamination.	Review the trend analysis to determine patterns or contamination and potential sources.	Review: • process records to identify whether anything has changed and ensure that process controls for *L. monocytogenes* are operating correctly; • the potential for the contamination of product and the zone 3 and 4, e.g. personnel movement and access from zone 2. • cleaning and sanitation records. Take relevant corrective actions to prevent potential future contamination from *L. monocytogenes* where necessary e.g. staff training. Other than product with a shelf life of 5 days or less, if the detection of presumptive *Listeria* is in zone 4 or the product, determine the range of product batches that were processed on the day of sampling, and their current location and put on hold.

Guidance

Some careful compositing of swabs from the areas within a site, e.g. specific items of equipment or from specific areas may be useful in the first instance to isolate potential sites for further investigation.

27.10 *L. monocytogenes* Detection in Zone 2 and 3

Guidance

This section covers the actions that operators processing chilled or frozen RTE product (including product with a shelf life of 5 days or less and those who are intermittently processing) should take if *L.*

monocytogenes is detected in zones 2 and/or 3.

Also see Appendix 2: Zones and issues to be considered when investigating the source of *L. monocytogenes* contamination

The following points should be noted in relation to environmental sampling:

- Compositing environmental swabs from different sites during investigative sampling to determine the source of contamination is not permitted, although it is possible to composite from a single piece of equipment.
- Taking additional samples will help identify the source of contamination, whether *L. monocytogenes* contamination has spread and if the product may be at risk from *L. monocytogenes*.
- Taking environmental samples after cleaning and sanitising will help to pinpoint the source of contamination.
- If the operation separates the processing of raw and RTE products using separation by time, unless there are control measures such as a full clean down between handling raw or RTE products, the entire processing area should be considered zone 3.

27.10.1 *L. monocytogenes* detection in zone 2

(1) Figure 4 describes the actions to be taken if *L. monocytogenes* is detected in the zone 2.

27.10.2 *L. monocytogenes* detection in zone 3

(1) Figure 5 describes the actions to be taken if *L. monocytogenes* is detected in the zone 3.

Figure 4: Actions following the detection of *L. monocytogenes* in zone 2

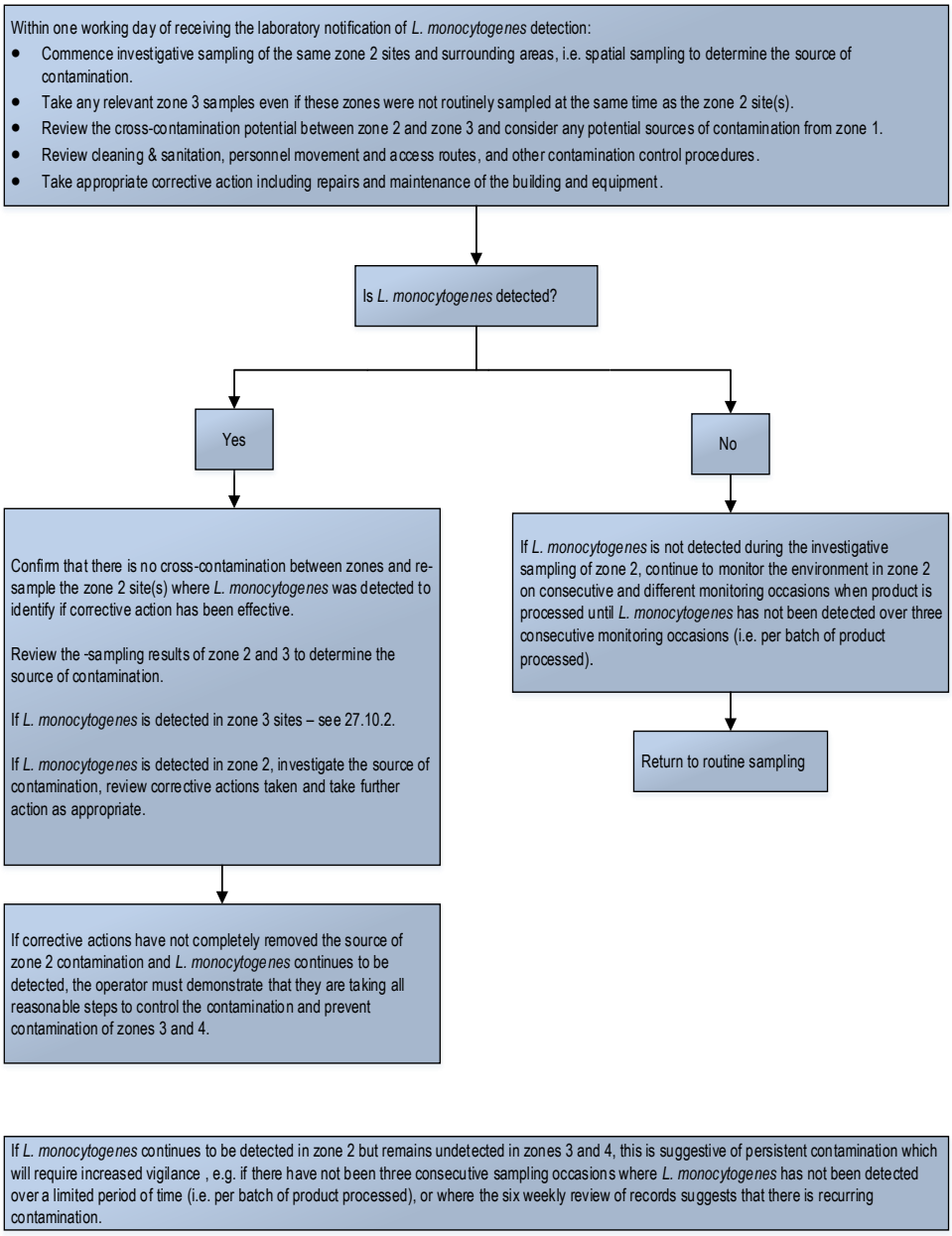
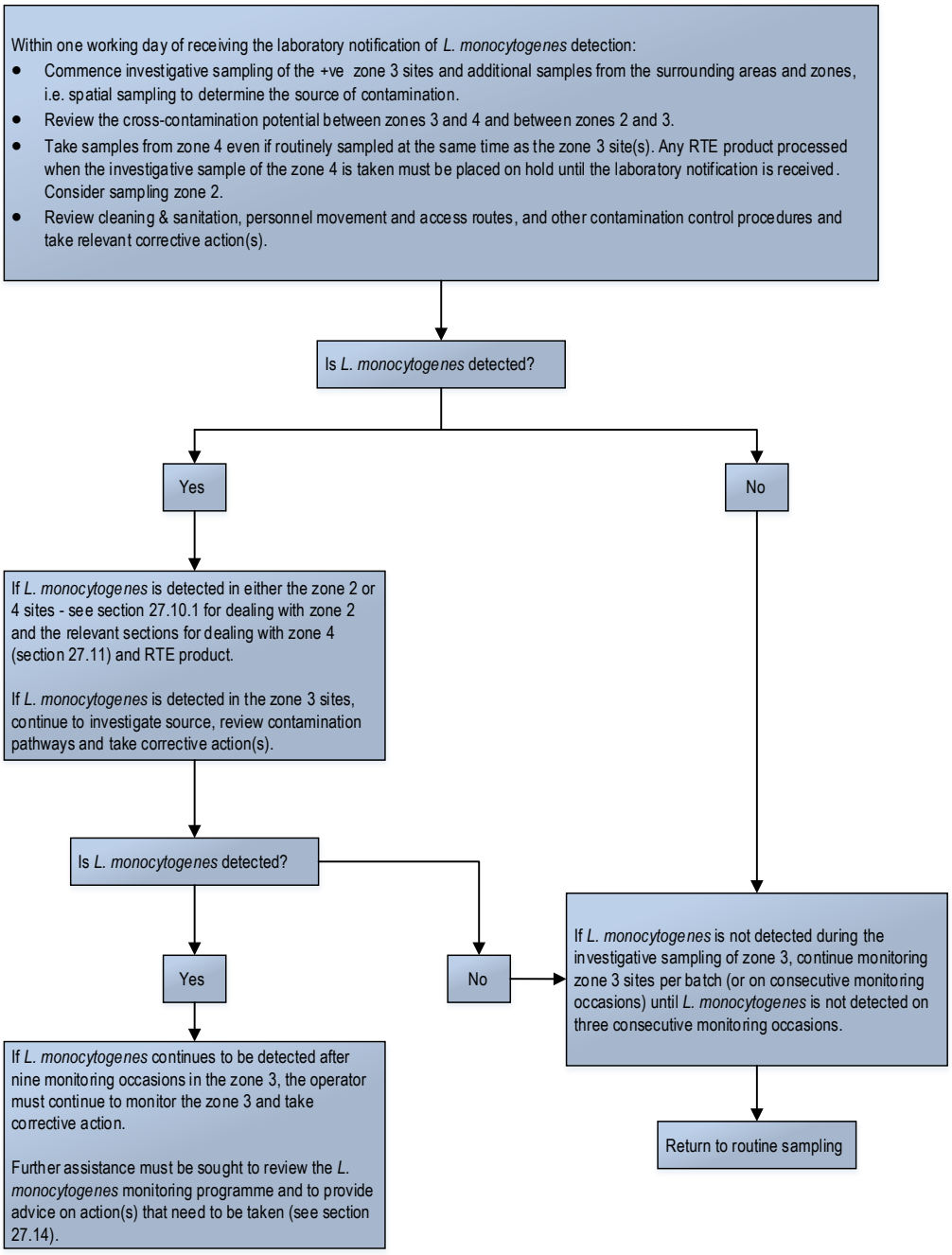


Figure 5: Actions following the detection of *L. monocytogenes* in zone 3



27.11 *L. monocytogenes* Detection in Zone 4 and/or Chilled Product

Guidance

L. monocytogenes contamination of zone 4 may result in the cross-contamination of any exposed product processed between major clean downs.

Investigative environmental sampling should sample the positive sampling sites and those from surrounding zones or areas, i.e. spatial sampling, to determine the source of contamination. Taking environmental samples after cleaning and sanitising will help to pinpoint the source of contamination.

Compositing samples from different pieces of equipment during investigative sampling is not permitted, but it is possible to composite from a single piece of equipment.

Table 15 describes the product samples that should be taken if testing is increased following *L. monocytogenes* detections. These are the sampling frequencies referred to throughout section 27.11.

Table 15: Product sampling frequency

Sampling plan	Definition	Minimum frequency	Sample numbers
Routine	Sample of product processed at the same time as the zone 4 environment is sampled	Fortnightly[15]	5 samples[16]
Increased	After the 1st detection of *L. monocytogenes*	Per batch of product processed after notification	20 samples[16]
Intensive	After the 2nd detection of *L. monocytogenes* After the 3rd detection of *L. monocytogenes*	Per batch of product processed after notification	30 samples[16]
Increased Verification	After three consecutive monitoring occasions of the non-detection of *L. monocytogenes* at the intensive sampling plan	Per batch of product processed after notification	10 samples[16]

You may instead decide to use an n=60 sampling plan. The following are some reasons for when and why this may be appropriate:

- trend analysis shows that *L. monocytogenes* has been detected on a number of occasions in the high-care area;
- analysing at n=60 may provide you and MPI with a greater level of certainty about whether *L. monocytogenes* is present, i.e. using an n=60 sampling plan will provide 95% confidence of detecting at least one case where the incidence level in the batch is 5%;
- the market that the product is intended for and any specific assurances required following the detection of *L. monocytogenes* may mean that n=60 is more appropriate.

Refer to Appendix 3 for guidance on systematic product sampling and testing, and the compositing of product samples.

27.11.1 First *L. monocytogenes* detection in zone 4 and/or chilled RTE product

Guidance

The corrective actions in this section apply when *L. monocytogenes* is detected in zone 4 or chilled RTE product at levels that exceed the specified limits when *L. monocytogenes* is first detected, rather than as part of a recurring problem identified through the trend analysis of the microbiological results.

(1) If *L. monocytogenes* is detected during the routine monitoring of zone 4 and/or chilled RTE product at levels that exceed the specified limits, actions should commence within one working day to deal with:

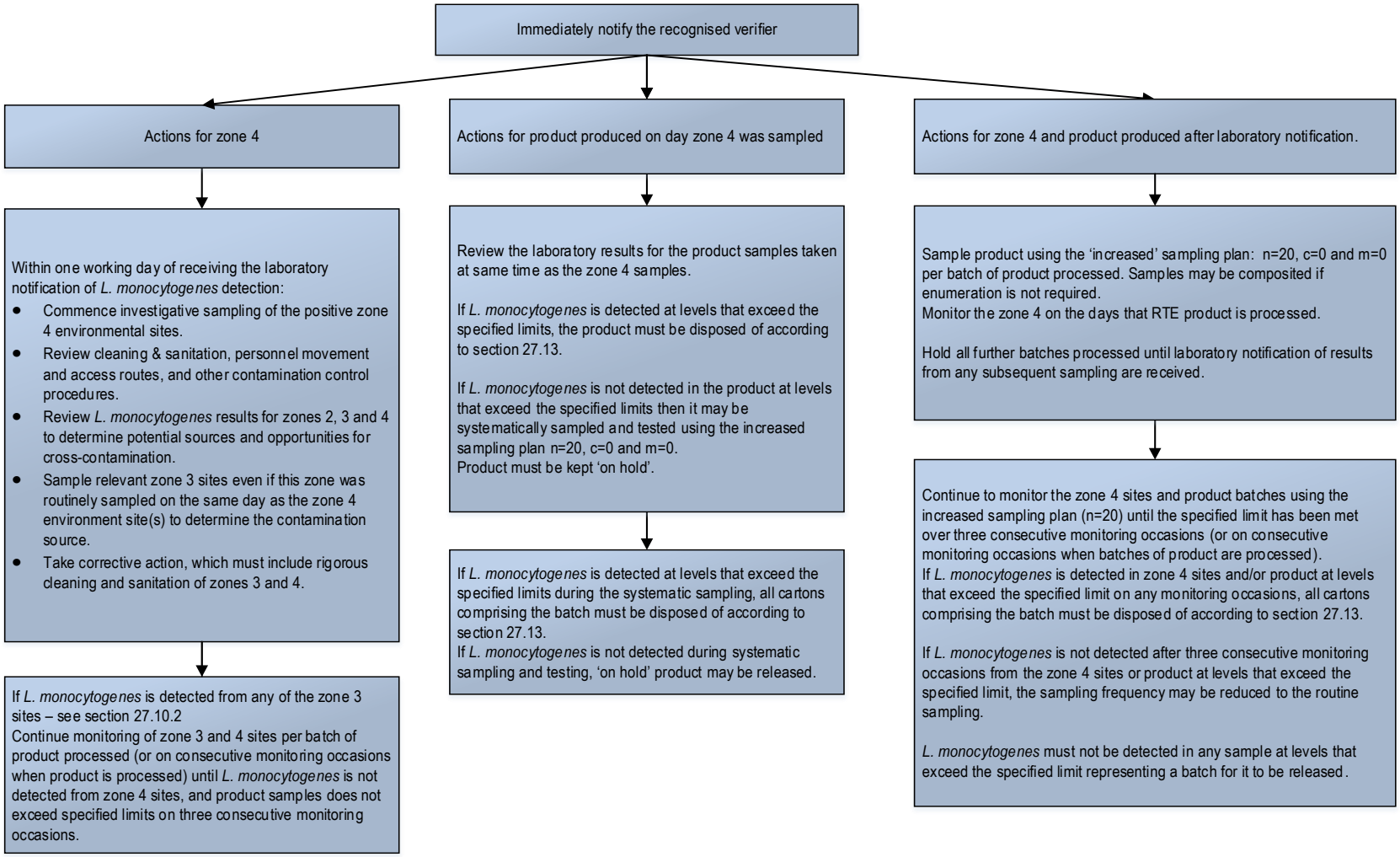
a) the environmental contamination;
b) the product processed at the same time as the zone 4 was sampled; and
c) zone 4 and the product processed after laboratory notification of *L. monocytogenes.*

(2) Figure 6 describes the actions to be taken if *L. monocytogenes* is detected in zone 4 and/or in chilled RTE product at levels that exceed the specified limits.

[15] All sampling (zones 2, 3, 4 and product) should be taken on the same day, within essentially the same time frame.

[16] The samples may be individual or composited. Typically if compositing 5 x 25g samples are tested, which may form a single 125g composite sample to meet the microbiological requirement of absence of *L. monocytogenes* in 125g.

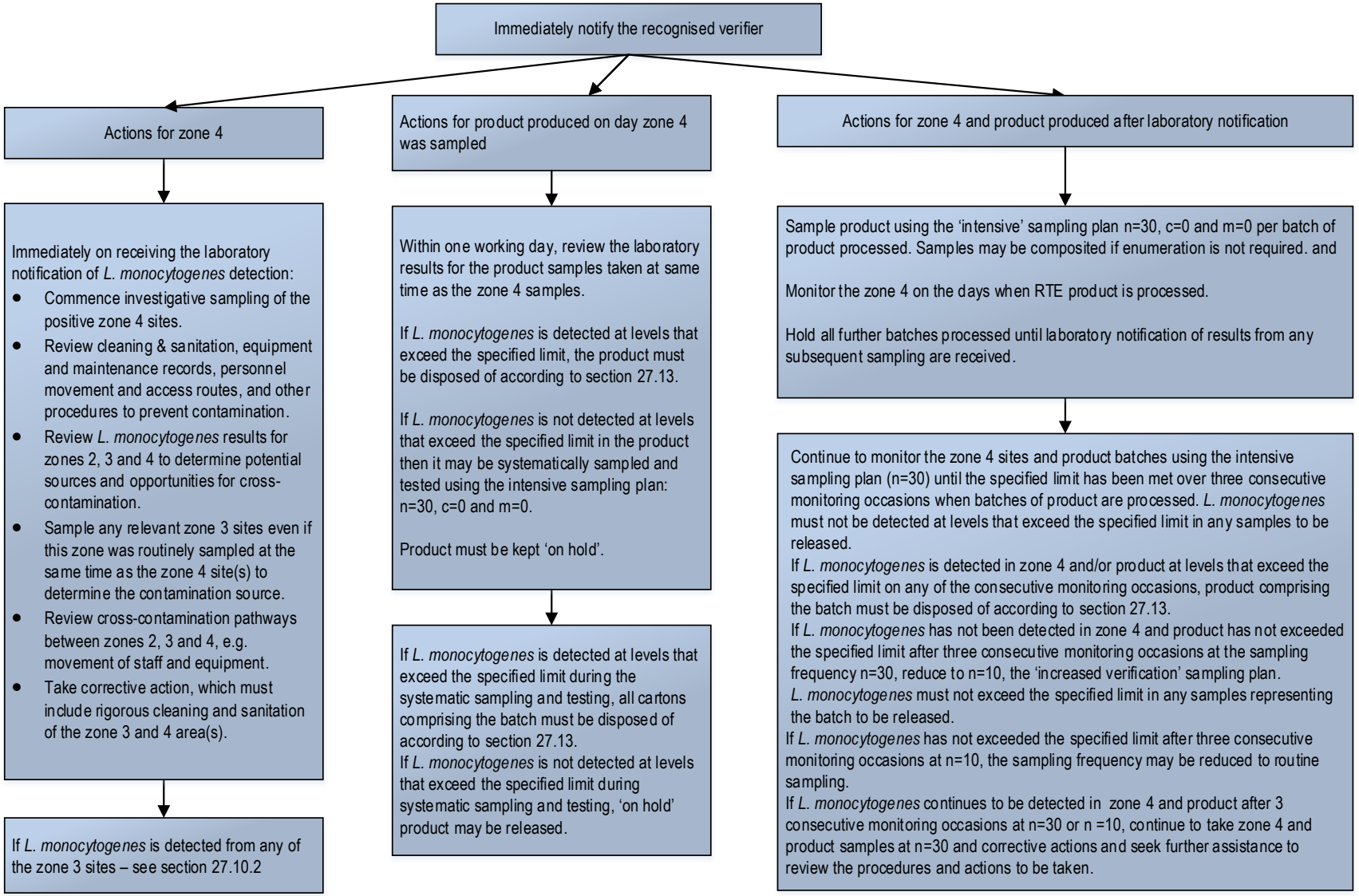
Figure 6: Actions following first detection of *L. monocytogenes* in zone 4 and/or chilled RTE product



27.11.2 Second detection of *L. monocytogenes* in zone 4 and/or chilled RTE product during monitoring

(1) If during the continued increased monitoring of zone 4 and product, or within the six week review period of laboratory results there is a second detection of *L. monocytogenes*, Figure 7 describes the actions to be taken.

Figure 7: Actions following second detection of *L. monocytogenes* in zone 4 and/or chilled RTE product



27.11.3 Third detection of *L. monocytogenes* in zone 4 and/or chilled product during monitoring

(1) If detection continues in zone 4 and/or in product at levels that exceed the specified limits for a third time:

a) The operator should seek further assistance (see section 27.14 for information on where further assistance can be obtained); and
b) consider temporarily ceasing the processing of product whilst a thorough and intensive cleaning and sanitising procedure is conducted.

27.12 Detection of *L. monocytogenes* in Zone 4 and/or Frozen RTE Product

(1) This section applies to RTE product that is exported frozen and frozen heat-shocked BMS for export. In this section, these are both referred to as frozen RTE.

(2) Figure 8 describes the actions to be taken if *L. monocytogenes* is detected in frozen RTE product at levels that exceed the specified limits or zone 4.

(3) If *L. monocytogenes* is detected during the routine monitoring of zone 4 or product at levels that exceed the specified limits, action must be taken within one working day to deal with:

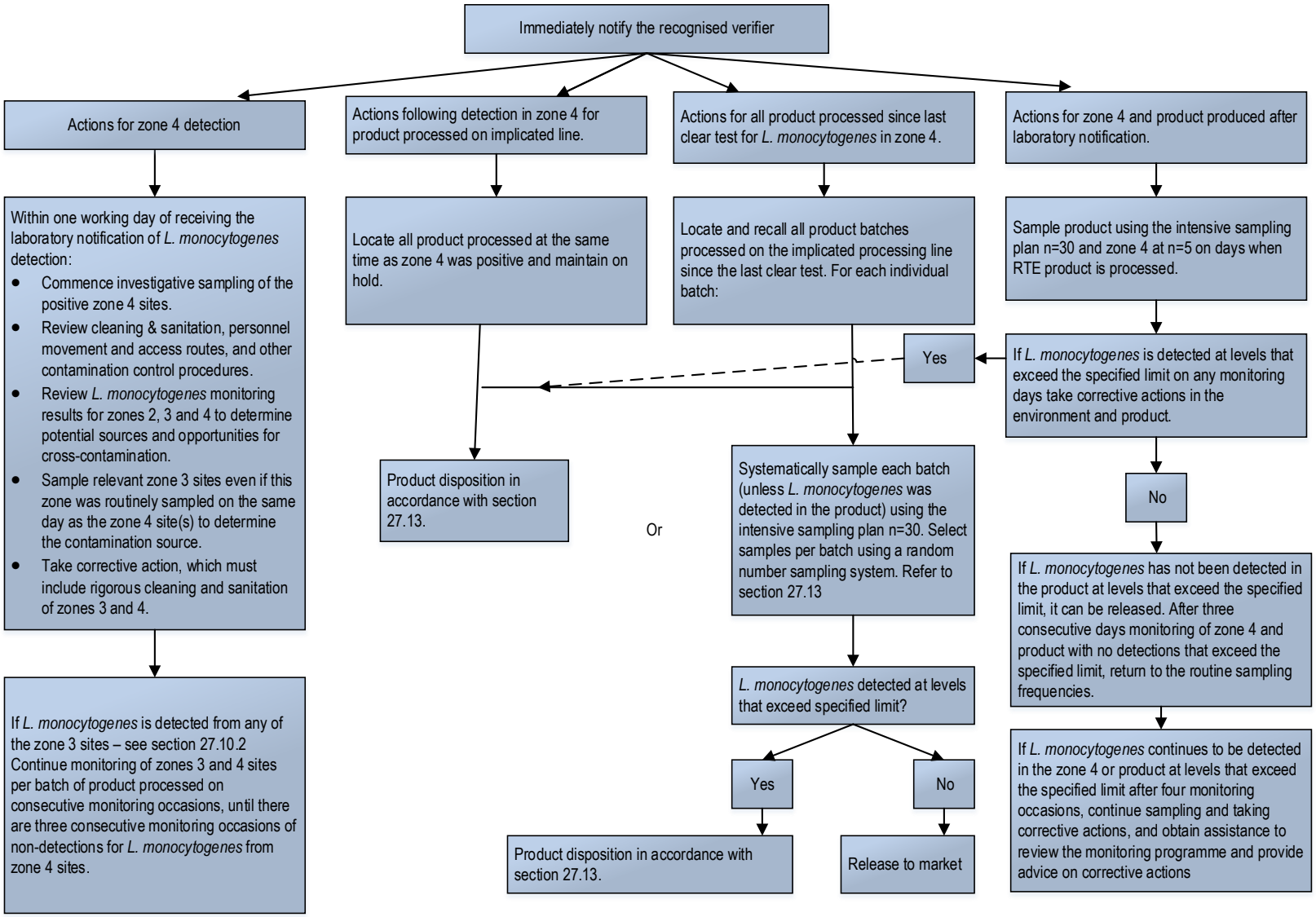
a) the environmental contamination; and
b) the product that was processed at the same time as zone 4 was sampled; and
c) the product that was processed since the last non-detection in zone 4; and
d) the product that has been processed since zone 4 samples were taken.

Guidance

L. monocytogenes contamination of zone 4 may result in the cross-contamination of any exposed product.

Refer to Part 4 Corrective Actions of the *Listeria* guides for more information.

Figure 8: Actions following detection of *L. monocytogenes* in zone 4 and/or frozen RTE product



27.13 Disposition of Product

(1) The method of product disposition must be described in the RMP for any product in which the specified limit for *L. monocytogenes* is exceeded [PSP Notice L3.4].

(2) The options for disposition of frozen RTE product are:

a) reprocessing;
b) destruction; or
c) systematic sampling and testing, however this is not permitted if *L. monocytogenes* is detected at levels that exceed the specified limits in the product sampled at the same time as the zone 4 sample. The retesting of the batch (i.e. testing into compliance) is not permitted; or
d) if the product is frozen heat-shocked BMS and meets alternative market criteria and/or specified limits, it may be released to that market.

Table 16: Product disposition

Method of Disposal	Details of Disposal Method	Conditions	Sampling
Destroyed	Managed in a way that product cannot be mistakenly or fraudulently released for consumption.	NA	NA
Reprocessed and released for trade	Reprocessed to reduce *L. monocytogenes* to acceptable levels using a validated process described in the RMP, with documented evidence; or Released to another business for reprocessing to reduce *L. monocytogenes* to acceptable levels using a validated process.	Where product is to be reprocessed under another operator's RMP, the transfer document accompanying the product should be endorsed with the following statement: "This product must be reprocessed in New Zealand in accordance with a *L. monocytogenes* control step". If the product is to be transferred to a business operating under the Food Act, this same information needs to be passed to the Food Act operator.	If reprocessing is to take place on the same processing line where *L. monocytogenes* was detected, where possible this should not occur until the relevant number of compliant results for *L. monocytogenes* from zone 4 environment and product batches has occurred on subsequent monitoring occasions. Reprocessed product should be sampled to confirm that the reprocessing has been effective at n=5, c=0 and m=0. Samples may be composited if enumeration is not required at *L. monocytogenes*/125g, (5 x 25g sub-samples = 125g tested). Where reprocessing is to take place on the same processing line where *L. monocytogenes* was detected but the relevant number of compliant results from the zone 4 environment and product batches has not occurred on subsequent monitoring occasions, reprocessed

Method of Disposal	Details of Disposal Method	Conditions	Sampling
			product should be sampled to confirm that the reprocessing has been effective at n=60 product samples (c=0 and m=0). Samples may be composited if enumeration is not required at *L. monocytogenes*/125g, where (12 x 125g sub-samples).
Alternative disposition	Method must be documented in the RMP.		

27.13.1 Systematic sampling and testing – Backdating

Guidance

The purpose of systematically testing each batch processed, also called 'backdating', is to determine if and when the product was contaminated with *L. monocytogenes*. Due to the sporadic nature of *L. monocytogenes* contamination events, the high-care area, especially zone 4, may have been a source of *L. monocytogenes* contamination before it was detected.

See Appendix 3 for information on how to select samples using a random sampling system.

(1) The product must not be released if *L. monocytogenes* is detected at levels that exceed the specified limit during systematic sampling.

(2) There are two options for systematic sampling and testing:

a) Work systematically backwards from the day before the notification of *L. monocytogenes* detection in the zone 4 environment. Randomly sample product from each batch (e.g. a working day) until there have been three consecutive monitoring occasions of compliance with the specified limit for *L. monocytogenes*.
b) Work systematically forward from the last compliant test for *L. monocytogenes* in the zone 4 environment, up until the day that the laboratory notification that *L. monocytogenes* was detected to sample product from each batch processed on the processing line. Product should be randomly sampled from each batch.

(3) In the option outlined in section 2(a) if *L. monocytogenes* is detected in one batch at levels that exceed the specified limit then all product from that point until the day that zone 4 environmental samples were taken is deemed to be contaminated with *L. monocytogenes* and should be either reprocessed according to a validated method in the RMP, or destroyed.

(4) Product should be sampled at n=30, c=0, m=0 samples per batch; and

Guidance

You may instead decide to use a n=60 sampling plan. See the guidance box in section 27.11 for further information.

a) If *L. monocytogenes* is detected in any sample at levels that exceed the specified limit, all cartons comprising the batch must be rejected. Retesting of the batch is not permitted.
b) If *L. monocytogenes* is not detected, the product may be released.

c) If reprocessed, product should be retested to confirm it has been effective, using n=5, c=0, m=0 product samples per batch to determine compliance with the specified limit for *L. monocytogenes*.

Guidance

If there are multiple occurrences of the detection of *L. monocytogenes* from different product batches during the systematic sampling this indicates that the process and any *L. monocytogenes* control steps are not under control. Further investigative sampling and reviews may be undertaken.

Examples of how to respond to results during the investigative sampling of different batches of RTE seafood product are in Appendix 4. Refer to Part 4 Corrective Actions of the *Listeria* guides for more information.

27.14 Further Assistance

(1) If the ETP indicates that there is persistent contamination with *L. monocytogenes* in zones 3 or 4, the operator should seek further assistance to review the procedure and to get advice on what action(s) to take.

(2) The operator must implement the remedial actions and procedures within the timeframe specified by the expert.

Guidance

A persistent contamination problem may be considered to be one where three consecutive *L. monocytogenes* non-detection has not been achieved after nine separate monitoring occasions from product batches and/or environmental samples from the high care environment following an a detection of *L. monocytogene*s.

Further assistance can be obtained from:
- laboratory personnel;
- industry or other technical experts; and
- the MPI *Listeria* guides.

For information about further assistance, contact Seafood New Zealand: cathy.webb@seafood.org.nz

27.15 Records

[APA section 17, AP Reg 23, PSP Notice B1.2]

(1) Records must be kept to demonstrate compliance with this Part.

(2) Records must include:

a) details of the sample (e.g. date and time of sampling, sample type and means of identification, identity of the sampler);
b) the analytical results (including copies of reports from the laboratory);
c) details of actions in the event of a detection of *L. monocytogenes* in environment or product samples (date, action taken, etc.); and
d) training records for persons involved in key tasks.

Refer to Part 19 for record keeping requirements.

Appendix 1: Compositing of products and environmental samples Q & As

What is a sample?

A "sample" is a small part or quantity that, when tested is deemed to represent the batch as a whole. A sample may be from a product or from an environmental swab(s).

What is the compositing of samples?

Compositing is the amalgamation of a number of samples from the same batch to produce a single 'final sample' or 'test portion' for microbiological or chemical testing.

A number of environmental swabs from the same zone, e.g. zone 2, zone 3, etc., may also be to form a composite sample for *Listeria* spp. or *L monocytogenes* testing.

When is compositing appropriate?

Compositing is appropriate if the number of samples required to assess the microbiological or chemical quality of a batch is prohibitively large in terms of laboratory resource or cost, and the power of the decision is not lessened by compositing.

Compositing of samples is appropriate only for qualitative analyses, i.e. presence/absence tests often described as 2-class sampling plans and represented by parameters of n=5 and c=0.

Compositing is not appropriate for quantitative tests. If producing products for export, operators should check the OMARs to determine whether the compositing of samples is permitted.

Compositing of samples is appropriate only if the whole composite is tested. The analytical sample cannot be a sub-sample of the composite.

Are there a maximum number of samples that can be composited?

The maximum number of samples composited may be specified in the regulatory or private standards or guidelines against which the test result will be judged. Typically a single composite sample is formed from 5 samples of 25g to produce a final sample of 125g.

If not stated, the maximum number of samples that may be composited is 15, as stated by the American Public Health Association (APHA). A lesser number may be specified by the laboratory depending on suspension volume and equipment capacity.

Are there any products or situations where compositing is not appropriate?

Compositing of samples is not appropriate for Norovirus testing of shellfish from growing areas or if quantitative tests are to be carried out.

Compositing of samples may not be appropriate for investigative or exploratory sampling when routine environmental monitoring has detected *L. monocytogenes* on a zone 4 site, i.e. when trying to identify a contamination source.

Where should the compositing of samples take place?

Compositing of swab samples may occur as collected.

Compositing of product samples should occur in the laboratory to enable verification of equal proportion. Product or samples should be submitted to the laboratory either in the original unopened container or packaging, or as separate samples. Samples should be collected aseptically by appropriately trained samplers and transported in sterile, labelled, containers to ensure maintenance of integrity of the sample.

Where compositing occurs at the premises, the operator should send the entire final composite sample to the laboratory, irrespective of final analytical sample size/weight, unless otherwise informed by the laboratory.

What are the limitations to the use of composite samples?

The testing of composite samples may reduce the sensitivity of the analytical method at very low levels of contamination such that a potentially positive result is missed.

Appendix 2: Zones and issues to be considered when investigating the source of *L. monocytogenes* contamination

(1) Zones and issues to consider when investigating the source of *L. monocytogenes* contamination:

a) dismantle and strip down of equipment, take swabs from internal surfaces and analyse after cleaning to confirm any sources of contamination have been removed. Taking environmental samples after cleaning and sanitising will help pinpoint the source of contamination;
b) check for cracks, chips or other possible sources of *L. monocytogenes* in surrounding zones such as the floors, walls and/or equipment;
c) review cleaning and sanitation procedures, including the use of mid-shift hose-downs. Check correct detergent, correct sanitiser, chemical strength, contact time, use of manual scrubbing, hard to clean zones, impossible to clean zones (metal-to-metal sandwiches, nylon-to-nylon sandwiches or nylon-to-metal sandwiches), care of cleaning equipment, etc.
d) ensure separation between the standard hygiene environment and high-care area, e.g. dedicated personnel, clothing and equipment, separate changing rooms with boot exchanges or boot washes;
e) ensure access routes between the standard hygiene environment and high-care area are controlled;
f) use of positive air pressure in the high-care area;
g) review procedures for incoming materials to minimise the risk of introducing *L. monocytogenes*;
h) pipe water to drains to prevent the creation of wet conditions in the processing areas in which *L. monocytogenes* can grow; and
i) ensure that there is no opportunity for condensation to drip onto product contact surfaces or product from overhead structures, such as overhead wiring, metal work, pipes, air conditioning units or vents.

Guidance

Also, see the *Listeria* Guides for further information about investigating contamination sources.

Appendix 3: Systematic sampling of product and composite samples

Systematic sampling

(1) All samples should be selected using a random sampling system. The total number of cartons in the batch should be known prior to computing the sampling plan. Each carton in the batch should be given a sequential number and the required numbered cartons selected using random number generators.

(2) Any carton which fits the parameters of the batch, but which was not included in the batch at the time of sampling should not, under any circumstances, be considered to be part of that batch (i.e. as a late entry) for the purposes of release/certification.

(3) No carton should be removed from the batch between allocating the sequential numbers and taking samples. Cartons should only be removed after the samples have been taken from the batch.

(4) All cartons comprising the batch should be disposed of according to the requirements in section 27.13. Disposition if *L. monocytogenes* is detected in any sample above the regulatory limit, i.e.:

a) *L. monocytogenes* is detected in a sample of product that has a regulatory limit of 0cfu/25g; or
b) *L. monocytogenes* is enumerated at levels above the limit set by the operator that has been validated to confirm that the product will not exceed the regulatory limit of 100cfu/g at the end of shelf life.

(5) If the specified limit for *L. monocytogenes* is met, the operator may release the product.

Example:
The batch is:
- all chilled RTE processed and packaged between major clean downs;
- determine where this product is held and write down the total number of cartons of product and its location;
- assign each carton in the batch a sequential number;
- using a random number generator-, generate random numbers (e.g. 30) from cartons;
- a sample should be taken from each of the X cartons (e.g. 30) corresponding to the random numbers. These samples should be stored separately from the batch.

Composite sampling of recalled product (not possible for enumeration)

(1) How to composite samples – following the detection of *L. monocytogenes* in the zone 4 environment or the product:

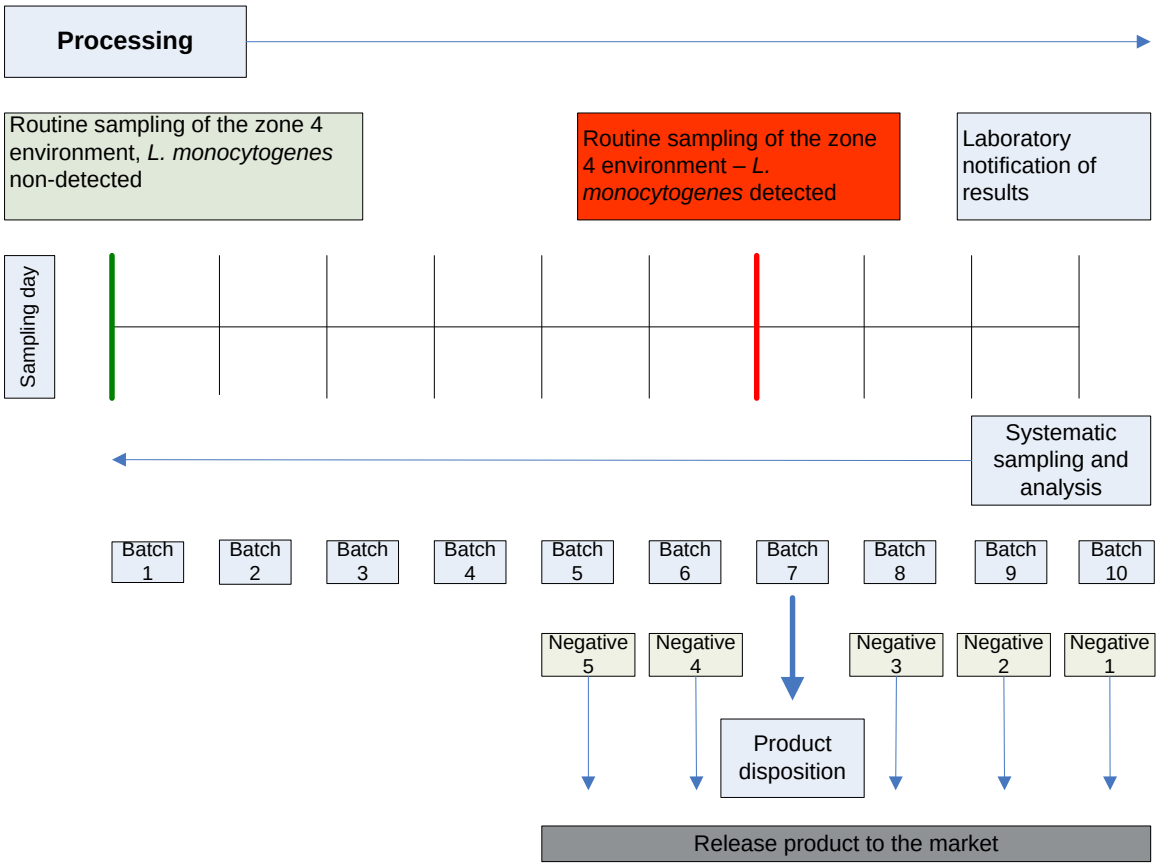
a) when the composite sampling of recalled product is required, the unopened packages of frozen product may be submitted to the laboratory. The laboratory will aseptically open the packages and take 25 g samples from each. These will form the composite sample which will be tested; the composite sample should not be more than five 25g samples (125g);
b) alternatively, where there are large cartons of product, the samples should be taken aseptically by the operator at the premises. Care should be taken to ensure that the equipment and packaging material used will not contaminate the RTE product.

Appendix 4: Frozen seafood product - Responding to results during investigative sampling of different batches

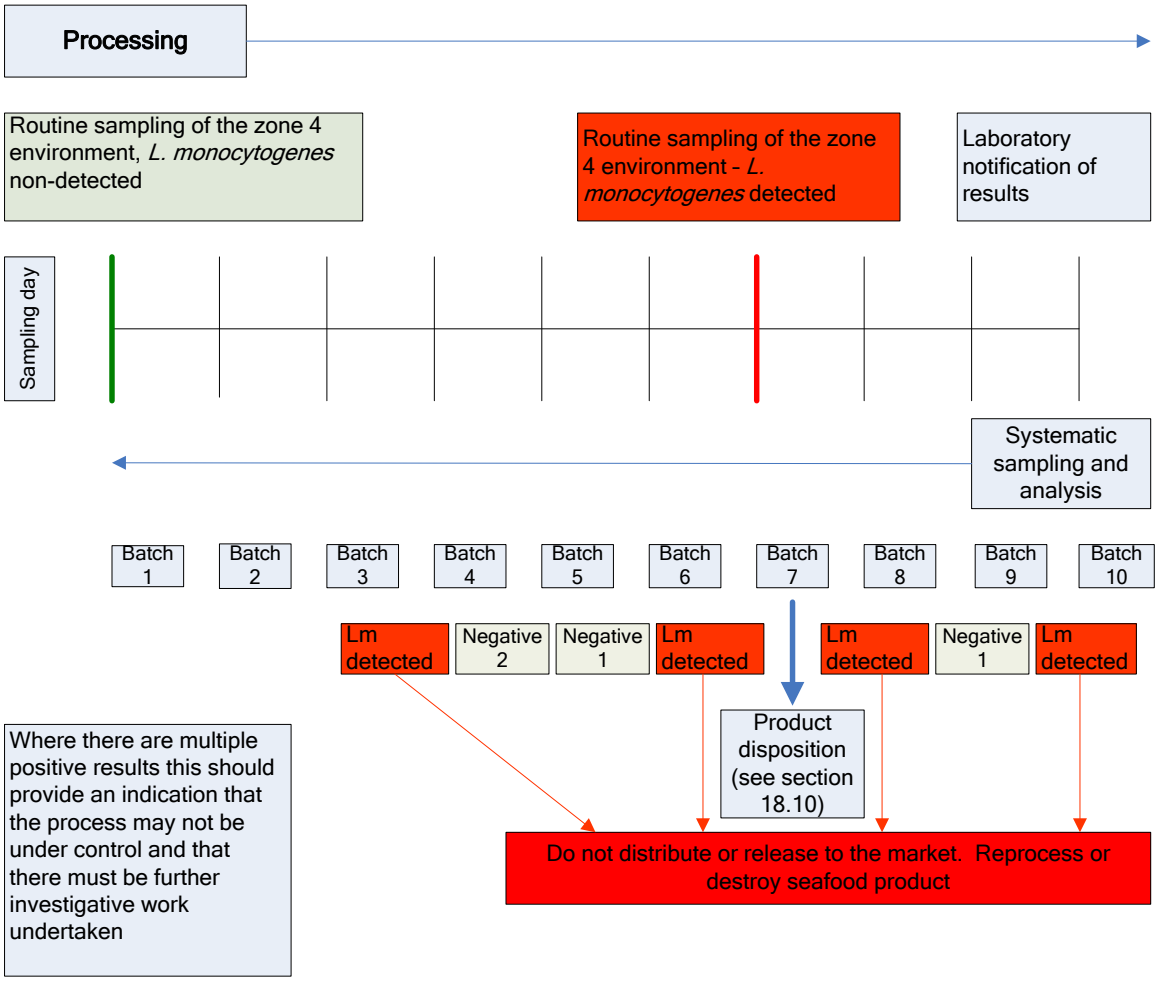
The following are examples of how to respond to results during investigative sampling. Backdating means the systematic sampling and testing of each batch of seafood product following the detection of *L. monocytogenes* in the zone 4 environment and/or product.

Example 1: Three consecutive monitoring days of compliance with specified limits for *L. monocytogenes*

A negative result means the specified limits have been met.



Example 2: Multiple detections of *L. monocytogenes* in product above specified limits during systematic sampling and testing



Appendix 5: Applying a 100cfu/g limit at end of shelf life

(1) When deciding which *L. monocytogenes* limits to apply, if your product meets the definition of RTE and does not fall into one of the following categories, then it should be considered a product that supports growth and the 'no detect' in 25 g limit applies. The product:

a) has a pH less than 4.4 (regardless of water activity); or
b) has a water activity less than 0.92 (regardless of pH); or
c) has a pH of less than 5.0 in combination with a water activity of less than 0.94; or
d) has a refrigerated shelf life of no greater than 5 days; or
e) is frozen (including products consumed frozen, and those intended to be thawed immediately before consumption)

(2) The product can be considered to 'not support growth', and the 100 cfu/g limit can be applied if you can validate during at least its expected shelf life that:

a) the level of *L. monocytogenes* will not increase by more than 0.5 log cfu/g; and
b) the limit of 100 cfu/g is not exceeded.

(3) Validation evidence should include how the evidence was generated e.g. the conditions under which the process or product parameters were validated. Refer to the RMP Manual for more information about validation.

Other resources:

The following documents also provide useful information when validating shelf life.

a) FSANZ Guidance on the Application of Microbiological Criteria for Listeria in RTE Food.
b) MPI Guide: How to Determine the Shelf Life of Food.
c) MPI Guide: What is Validation.
d) EURL *Lm* Technical Guidance Document for conducting shelf life studies on *Listeria monocytogenes* in ready-to-eat foods (version 4 – 1 July 2021)

Appendix 6: Validation of listericidal process after being sealed in final packaging (marinated products)

Pottled, marinated products such as mussels, squid and octopus, will need to be assessed on a case by case basis to determine whether they meet the criteria for exclusion from Part L3 of the PSP Notice.

To be excluded, you need to demonstrate that the product "receives a listericidal process after being sealed in the final packaging, where that packaging ensures the prevention of recontamination until opened by the consumer or until the packaging is otherwise compromised".

One way to validate this would be to gather information about the pH, a_w, aqueous phase salt, storage temperature and time of the product and then use a modelling programme such as ComBase to determine the time to achieve a minimum of 2 $\log_{10}$ reduction in the concentration of *L. monocytogenes*. The product should not be available for sale until the time for inactivation has elapsed.

Another option would be to carry out a challenge trial where a cocktail of at least 3 strains of *L. monocytogenes* is inoculated in the product and inactivation determined.