Code of Practice:

Processing of Bee Products

Part 2: Good Manufacturing Practice

1 Prelims

Amendment 1

March 2006

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Website

A copy of this document can be found at: http://www.nzfsa.govt.nz/animalproducts/index.htm

Review of Code of Practice

This code of practice will be reviewed, as necessary, by the New Zealand Food Safety Authority. Suggestions for alterations, deletions or additions to this code of practice, should be sent, together with reasons for the change, any relevant data and contact details of the person making the suggestion, to:

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Amendment Record

It is important that this publication is kept up-to-date by the prompt incorporation of amendments.

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2 Introduction

Amendment 1

March 2006

2.1 Purpose and scope

This code of practice (COP) has been developed by the New Zealand Food Safety Authority (NZFSA), in consultation with an industry working group, to assist bee product processors meet the requirements of the Animal Products Act 1999 and produce products for human or animal consumption that are fit for their intended purpose. It applies to businesses involved in the secondary processing of bee products which covers the extraction of honey; and the processing, packing and storage of honey, and other edible bee products.

Part 2 of this COP covers Good Manufacturing Practice (GMP) essential for the consistent production of edible bee products that are fit for their intended purpose, and that meet relevant regulatory requirements. It provides guidance on hygienic practices and process control that directly or indirectly impact on the safety and suitability of products. Compliance with these GMP measures will assist operators meet the requirements of the Animal Products Act 1999, particularly the current version of the Animal Products (Specifications for Products Intended for Human Consumption) Notice.

GMP is the foundation for Hazard Analysis and Critical Control Point (HACCP) and of risk management programmes (RMPs). The HACCP approach applied in Part 3 of this COP is based on the expectation that GMP is effectively implemented prior to the application of HACCP principles.

GMP can also be referred to as Good Operating Practice or Supporting Systems.

2.2 Layout of Part 2

Part 2 is divided into several GMP programmes that cover hygiene and sanitation, process control and operating procedures, and other RMP requirements. The GMP programmes are laid out with the following subheadings:

Purpose and Scope

This describes the purpose of the GMP programme and its scope of application.

Sources of Hazards

This section identifies the sources of hazards that are controlled under the particular GMP programme, and gives examples of hazards associated with each source. It does not apply to those GMP programmes that do not directly address a particular source of hazard (e.g. inventory control, calibration).

Mandatory Requirements

These requirements are mandated by legislation, and must be met or complied with by the operator. The mandatory requirements are not directly quoted from legislation. They have been paraphrased to make them relevant to bee products and easier to understand. The specific legislation from which each requirement has been derived is cited to assist those who may wish to read the actual piece of legislation referred to. Actual legislation will always take precedence and it is the operator's responsibility to check for changes to legislation.

The abbreviations used for legislation cited in this document are:

AP Reg - Animal Product Regulations found at:
http://www.nzfsa.govt.nz/animalproducts/legislation/regulations/index.htm

HC Spec - the current version of the Animal Products (Specifications for Products Intended for Human Consumption) Notices found at:
http://www.nzfsa.govt.nz/animalproducts/legislation/notices/animal-material-product.htm

RMP Spec – the current version of the Animal Products (Risk Management Programme Specifications) Notice found at:
http://www.nzfsa.govt.nz/animalproducts/legislation/notices/animal-material-product.htm

Procedures

The procedures given are the accepted or industry agreed means of achieving or complying with the mandated requirements. These procedures cover control, monitoring, corrective action, and verification. The operator must comply with the procedures that are applicable to their product and process. For example, an extractor must comply with all the GMP procedures and requirements related to the extraction premises and process.

There may be cases when the operator may decide to use an alternative process, procedure or parameter that is not provided for in this COP (e.g. when new technology becomes available). The operator must be able to demonstrate the effectiveness of any alternative to consistently meet all relevant regulatory requirements and produce products that are fit for their intended purpose. Confirmation of the effectiveness of any alternative process,

procedure or parameter may involve the collection and analysis of evidence by the operator (e.g. data from testing or trials, published scientific information, report from an expert). A protocol for the collection of data should be prepared by the operator as discussed in the Risk Management Programme Manual.

This GMP section will be reviewed, as necessary, and the inclusion of any alternative process, procedure or parameter will be considered as part of this review.

The GMP programmes covering hygiene and sanitation (e.g. pest control, design and construction), and RMP requirements (e.g. product recall) are expected to apply to the processing of all types of bee products. However, the process control procedures given in Part 2 only cover honey and dried pollen. The processing of other types of bee products (e.g. honey and fruit blends, honey and velvet, propolis extract) may not be adequately covered. The operator will, therefore, need to write their own process control procedures for these other types of products.

Guidance

Guidance material is presented in a box. It provides explanatory information and options for achieving a particular outcome or requirement. Operators may use alternative methods or measures to those set out in the guidance material provided they do not in any way compromise GMP and the achievement of regulatory requirements. Justification is not needed when deviating from guidance.

Records

This section gives the list of records that must be kept by the operator.

2.3 Documentation of GMP

2.3.1 Legal requirement

The current version of the RMP Specifications requires the operator to document sufficient procedures to ensure that GMP is applied. These procedures must cover:

- the control measures to be used to control hazards and other risk factors;
- any parameters to be met;
- any monitoring procedures that are to be carried out; and

- any corrective action procedures that are to be applied in the event of loss of control, including restoration of control; identification and disposition of affected animal material or animal product; and any measures to be taken to prevent reoccurrence of the loss of control.

The GMP programmes or supporting systems needed for an RMP for a typical honey extraction, processing and packing operation are already documented in this COP. Therefore, most honey extractors or packers will not need to document their own supporting systems except for certain process procedures specific to their operation. All that is required is that the operator incorporates the relevant supporting systems into their RMP by reference (refer to the RMP templates in Part 5).

When the COP does not cover a particular procedure required for the operator's RMP, the operator will need to write their own procedures. Sufficient detail must be given to ensure that managers and staff know what to do, to assist in staff training and to ensure clear understanding by external verifiers and accredited evaluators.

2.3.2 Contents of supporting systems

When it is necessary for the operator to document supporting systems, it is recommended that they contain the following details:

- Purpose and scope
- Authorities and responsibilities
- Materials and equipment, as applicable
- Procedures (covering control measures, monitoring, corrective action and operator verification)
- Records
- References to other relevant documents, as applicable.

3 Design, Construction and Maintenance of Buildings, Facilities and Equipment

Amendment 1

March 2006

3.1 Purpose and scope

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

3.2 Sources of hazards

Source	Examples of hazards
Facilities, equipment	Bacterial pathogens, e.g. *Listeria monocytogenes, Salmonella* Chemical residues, e.g. heavy metals from equipment Physical hazards, e.g. metal, glass
Maintenance compounds (e.g. lubricating fluids)	Chemical residues
Environmental contaminants (e.g. dust, fumes, pollutants, sewage)	Microbiological pathogens, e.g. *Salmonella*, *E. coli* spp., *Clostridium* spp. Chemical residues, e.g. agricultural chemicals

3.3 Mandatory requirements

3.3.1 AP Reg 10

The premises, facilities, equipment and essential services must be designed, constructed, located and operated in a manner that:

- enables the suitability of any edible bee product to be maintained;
- enables the fitness for intended purpose of any edible bee product to be achieved and maintained; and

- minimises and manages the exposure of any edible bee product, packaging, equipment, and the processing environment to hazards and other risk factors.

3.3.2 HC Spec 5 (1)

Any material or exposed internal surface finish used in the building, manufacture, or maintenance of facilities, equipment, or internal structures, that may affect the suitability for processing or the fitness for intended purpose of any edible bee product, must:

- be impervious, non-absorbent, and free from depressions, pits, cracks, and crevices that may harbour contaminants;
- be easily cleaned and sanitised;
- be unaffected by any corrosive substance with which it is likely to come into contact, to the extent necessary to ensure that it will not harbour contaminants and is not a source of contamination;
- be durable, resistant to fracture, and capable of withstanding repeated exposure to normal cleaning and sanitising;
- in the case of surfaces (other than those used for walking or standing on during operations), be smooth and minimise the accumulation of condensation; and
- in the case of materials lining the walls, floors, and ceilings, be of a colour that does not disguise contaminants having regard to the lighting arrangements.

3.3.3 HC Spec 5 (2)

The facilities, equipment, and internal structures, that may affect the suitability for processing or the fitness for intended purpose of any edible bee product, must be of sanitary design.

3.3.4 HC Spec 20

Equipment and storage areas that are used to store or contain waste must:

- be clearly identified, and if equipment is permanently installed and in an identified storage area then either the equipment or storage area may be identified; and
- not be a source of contamination to any edible bee product.

3.3.5 HC Spec 7

Lighting must be of a sufficient intensity and quality to enable satisfactory performance of all operations.

3.3.6 HC Spec 6 (3)

Temperature controlled rooms and equipment must be operated within their design capability and capacity, and must consistently deliver any required temperature.

3.3.7 HC Spec 6 (4)

Cleaning and sanitation facilities, and equipment, must be provided to ensure that the hygiene of personnel, equipment and the premises or place can be maintained.

3.3.8 HC Spec 6 (5)

Access to facilities that are sufficient for official assessors and Animal Product Officers to perform their role must be provided.

3.3.9 HC Spec 19 (1)

Equipment or storage areas used to store or contain any bee product that is not suitable for processing or not fit for human consumption, but is suitable or fit for some other purpose, must be clearly identified and not be a source of contamination to any other bee product that is intended for human consumption.

3.3.10 HC Spec 19 (2)

Any bee product that is not suitable for processing or not fit for human consumption but is suitable or fit for some other purpose, must be kept under controlled conditions until 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.

3.3.11 HC Spec 28 (1)

Measuring equipment, such as scales, thermometers, pH meters, and flow meters (whether stand alone or forming part of a piece of equipment), that is used to provide critical measurements, must:

- have the accuracy, precision, and conditions of use appropriate to the task performed;
- be calibrated against a reference standard showing traceability of calibration to a national or international standard of measurement (where available), or (if no such reference standard exists) be calibrated on a basis that is documented in, or incorporated by reference into, the risk management programme; and
- be uniquely identified to enable traceability of the calibrations and to identify calibration status.

3.3.12 HC Spec 28 (2)

Minimum frequencies of calibration must be specified in the risk management programme for each piece of measuring equipment used to provide critical measurements, or used as reference standards, taking into consideration the following (as appropriate):

- the stability of the piece of equipment;
- the nature of the measurement; and
- the manufacturer's instructions.

3.3.13 HC Spec 28 (3)

Safeguards must be in place to prevent unauthorised adjustments to the calibration of the measuring equipment, including movement of the equipment where this may invalidate the calibration.

3.4 Procedures

3.4.1 Site

3.4.1.1 Potential sources of contamination must be considered when deciding where to locate the premises, as well as the effectiveness of any reasonable measures that might be taken to protect the product. Premises must be located away from:

- environmentally polluted areas and industrial activities which pose a serious threat of contaminating food;
- areas subject to flooding unless sufficient safeguards are provided;
- areas prone to infestation of pests; and
- areas where wastes, either solid or liquid, cannot be effectively removed.

3.4.1.2 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.

3.4.2 Buildings and facilities

Adequate facilities must be available for**:**

- the hygienic performance of all operations, including the extraction of honey, and the processing and packing of edible bee products;
- storage of products, packaging, ingredients, cleaning materials and other maintenance compounds, and other materials;
- storage and distribution of water;
- cleaning and sanitation of facilities and equipment;
- personnel hygiene (e.g. toilets, hand washing units, changing facilities); and
- effective drainage and disposal of wastes.

3.4.2.1 Adequate working space must be provided to allow for:

- the hygienic performance of all operations;

- access of personnel;
- installation of equipment;
- effective cleaning; and
- storage and access of materials.

3.4.2.2 Internal structures of buildings, including floors, ceilings and walls, must be designed and constructed in such a manner that:

- minimises contamination of the product;
- facilitates cleaning and maintenance;
- minimises the entrance and harbourage of pests; and
- minimises the entry of environmental contaminants.

Further guidance on the design and construction of facilities can be found in the *Reference Manual for Honey Extracting Facilities and Food Safety Program* of Capilano Honey Ltd., Australia.

3.4.2.3 Floors that are subject to wet cleaning must be constructed of impervious material, be easily and effectively cleaned, and facilitate the drainage or removal of water.

Materials used in floor construction should be sealed concrete or other non-toxic substance impervious to liquids, and acid resistant. Honey reacts with normal concrete and will break down the surface. Industrial welded vinyl when laid over a masonite base is also a suitable floor covering. Concrete floors can be sealed using an epoxy type finish, a chemical sealant or acid resistant paint. Floors should be sloped so that water will run off to floor drains.

3.4.2.4 Floor surfaces must be relatively smooth but not slippery.

A rough surface will trap small amounts of honey and water that will eventually go mouldy.

3.4.2.5 Floor joints in processing areas must be sealed with material impervious to liquids and finished flushed with the surface.

A suitable floor joint sealant is polyurethane or polysulfone epoxy mastic.

3.4.2.6 Floor and wall angles and joints must be constructed in a manner that can be effectively cleaned.

The floor/wall joint should be coved in areas where wet operations or cleaning occur to allow effective cleaning.

3.4.2.7 Walls in processing areas must be constructed of smooth, non-absorbent and washable material.

Insulated panels are recommended for the construction of processing areas. Laminates and melamine face sheeting are also suitable construction materials. Plywood or gib board may be used for walls provided they are effectively sealed so that they are impervious and washable. Unsealed ply panels should not be used due to their tendency to swell and lift if penetrated by water.

3.4.2.8 Wall joints must be sealed to prevent ingress of water, pests and contaminants.

3.4.2.9 If timber is used in doors, door jambs, and windows in processing areas, the timber must be sealed by the application of a durable, non-toxic, opaque surface coating.

Gloss enamel, epoxy or polyurethane paint will satisfy this requirement.

3.4.2.10 Lights and light fixtures over any edible bee product or exposed packaging material must be of a safety type, or otherwise protected to prevent contamination of products in the event of breakage.

3.4.2.11 Buildings and facilities must be designed to provide separation, by partition, location, or other effective means, between those operations, including waste disposal, which may cause contamination of any edible bee product.

3.4.2.12 Vehicle loading bays that are located within the building where processing occurs must have sealed floors to control dust.

3.4.3 Equipment

3.4.3.1 All equipment that come into contact with any edible bee product must be designed, constructed, installed and operated in a manner that:

- ensures the effective performance of the intended task;
- ensures effective cleaning;
- facilitates good hygienic practices, including monitoring; and
- does not cause contamination of the product.

3.4.3.2 Equipment must be able to be effectively cleaned by normal procedures without damage to the material's surface.

3.4.3.3 Equipment must be:

- durable
- resistant to chipping, flaking, delamination, abrasion;
- able to withstand exposure to heat, water and the particular bee product (e.g. honey is acidic) under normal operating conditions; and
- corrosion resistant.

3.4.3.4 All surfaces in direct contact with edible bee product must be inert to the product, cleaning materials and other substances under normal conditions of use.

3.4.3.5 The following materials must not be used in any equipment that may come in contact with honey:

- metals such as cadmium, lead and their alloys;
- sponge rubber, stone slab, leather and fabrics (excluding strainers/filters); and
- cast iron and galvanised iron.

Stainless steel (300 series or better) is the preferred material for equipment that comes into contact with honey and other edible bee products.

Cast iron is not permitted for product contact surfaces because it is readily corroded and surfaces become roughened and pitted, which makes cleaning difficult.

Galvanised metal is not permitted because the zinc coating wears off to expose the base metal which corrodes. In addition, the zinc coating is soluble in acidic food, and in acid and alkali detergents. Where galvanised metal is present in equipment and it is practical to do so, it may be coated with a food-grade protective coating.

Aluminium is not recommended. It has a tendency to warp, is susceptible to oxidation, and is also prone to corrosion.

Wood is not considered a suitable material for the construction of food machinery. Its porous nature allows products to penetrate the surface and once impregnated it cannot be cleaned effectively. Residual product provides a nutrient source for microorganisms.

Copper and its alloys, such as bronze, and brass, should not be used for direct product contact. Acidic foods may dissolve and erode copper sufficiently to pose as a food hazard.

New equipment for direct contact use with honey and other edible bee products should be provided with a letter of guarantee from the supplier certifying its suitability for food use.

3.4.3.6 Containers (e.g. plastic buckets) used within the premises for holding edible bee products, wiping cloths, cleaning materials, wastes or other materials must be clearly identified and differentiated as to their use (e.g. by labels or colour coding).

3.4.3.7 Measuring equipment, such as weighing scales, thermometers, and refractometers (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.

The calibration requirements specified in HC Spec 28 only apply to equipment that is used to provide critical measurements. Evaluation of typical honey processing operations in New Zealand indicates that it is unlikely there is a product or process parameter that can be considered as critical for food safety and is necessary to be controlled and measured by the processor. However, there may be other bee products intended for specific consumer groups that could require critical measurements to be taken. This should be determined by the operator when developing their RMP.

3.4.3.8 Suitable cleaning equipment that is maintained in a hygienic and good working condition must be available for cleaning and sanitising of equipment and facilities.

3.4.3.9 Outside waste bins must have tight fitting lids or covers.

3.4.4 Repairs and maintenance

All alterations, repairs and maintenance work on buildings, facilities and equipment must be done in a manner that minimises exposure of products to hazards introduced by this work.

3.4.5 Monitoring

Compliance to documented procedures must be regularly checked by the responsible person.

For extractors and packers who operate on a seasonal basis, compliance to requirements for design and construction should be checked before the start of each season. An example of a pre-season checklist is given in Appendix 1. [A copy of the checklist is available as a separate document to this Part for ease of downloading and use].

3.5 Records

3.5.1 Records giving the following information must be kept by the operator:

- Pre-season checklist, as applicable;
- Any problem detected regarding buildings, facilities and equipment;
- Any alterations or repairs done; and
- Any corrective action taken (including restoration of control, product disposition and prevention of recurrence).

Records may be kept in a daily diary, logbook, record form or checklist. Refer to Section 11 for record keeping requirements.

4 Potable Water

Amendment 1

March 2006

4.1 Purpose and scope

To ensure that adequate supply of potable water is available for hygienic operations so as to minimise contamination and maintain the fitness for intended purpose of edible bee products.

4.2 Sources of hazards

Source	Examples of hazards
Faecal material (e.g. animal droppings, sewage)	Pathogenic microorganisms – E. coli spp, Campylobacter spp, Crysptosproium, Giardia, viruses
Agricultural chemicals (e.g. fertiliser, pesticides)	Nitrate
Soil	Pathogenic microorganisms – E. coli spp, Campylobacter spp, Crysptosproium, Giardia, viruses Toxic chemicals, e.g. arsenic, boron
Pipes and tanks	Copper
Roof paint for roof collected water	Lead

4.3 Mandatory requirements

HC Spec 8, 9, 10, 11, 12, Schedule 1

4.3.1 Water that comes into direct contact or indirect contact with any edible bee product must be potable water at the point of use.

4.3.2 The operator must implement a reticulation management plan for potable water used within a premises or place.

4.3.3 In addition to 4.3.2, operators must implement a water management plan if:

- water is supplied by an independent supplier and is subjected to any treatment by the operator;
- or water is supplied by the operator solely for the operator's use.

4.3.4 In addition to 4.3.2 and 4.3.3, operators that supply their own water must comply with the requirements of Schedule 1 of the current version of the Animal Products (Specifications for Products Intended for Human Consumption) Notice, including completing the Checklist: Assessment of Water Supply Status for water that comes into direct or indirect contact with any edible bee product.

4.4 Procedures

4.4.1 Supply

Adequate supply of potable water must be available and used for:

- cleaning of product contact equipment and surfaces;
- cleaning and sanitation of reused packaging;
- washing of hands of personnel involved in the handling of any edible bee product, packaging, and product contact equipment; and
- any other activity wherein water comes into direct or indirect contact with any edible bee product.

4.4.2 Criteria for potable water

The criteria for potable water are given in Table 1.

Table 1. Quality of Potable Water

Measurement	Criteria
Faecal coliforms	Must not be detectable in any 100 ml sample
Chlorine (when chlorinated)	Not less than 0.2mg/l (ppm) free available chlorine with a minimum of 20 minutes contact time
pH (when chlorinated)	6.5 to 8
Turbidity	Should not routinely exceed 1 NTU, must not exceed 5 NTU

4.4.3 Summary of requirements for water from different sources

Source	Requirements
Town supply or other independent supply with no additional treatment[1] by operator	Management of reticulation system – Section 4.4.4.1 Procedures for non-complying water – Section 4.4.4.2 Handling and disposition of contaminated materials – Section 4.4.4.3
Town supply or other independent supply with additional treatment[1] by operator	Management of reticulation system – Section 4.4.4.1 Procedures for non-complying water – Section 4.4.4.2 Handling and disposition of contaminated materials – Section 4.4.4.3 Water management plan, including water sampling and testing – Section 4.4.5
Operator's own supply (e.g. water sourced from a bore, river, stream, roof)	Management of reticulation system – Section 4.4.4.1 Procedures for non-complying water – Section 4.4.4.2 Handling and disposition of contaminated materials – Section 4.4.4.3 Water management plan – Section 4.4.6.1 Water sampling and testing – Section 4.4.6.2 Assessment[2] and reassessment of water supply status – Sections 4.4.6.1 and 4.4.6.3, and Schedule 1

1. Examples of additional treatment are chlorination, filtration, boiling, ultraviolet radiation and reverse osmosis.

2. Assessment based on the completed Assessment of Water Supply Status Checklist from Schedule 1 of the current version of the Animal Products (Specifications for Products Intended for Human Consumption) Notice.

4.4.4 Requirements for water from any source

The requirements given under this section applies to water from an independent supplier (e.g. council or town supply) and water supplied by the operator for their own use (e.g. roof water, river water, water from a bore).

An operator who uses potable water supplied by an independent supplier without additional treatment only needs to comply with the requirements given in this section 4.4.4.

4.4.4.1 Management of reticulation system (i.e. reticulation management plan)

a. The water reticulation system within the premises must be designed, installed and operated in such a manner that prevents:

- cross connections between potable and non-potable water;

- stagnant water (i.e. no dead ends and unused pipes); and
- back flow that may cause contamination of the water supply.

b. Water pipes, storage tanks and other parts of the reticulation system must be maintained in good condition.

c. The reticulation system must be flushed (i.e. taps are opened at point-of-use to allow a significant flow of water to occur) when water is not used for an extended period, and after any repairs to the system, to ensure that stagnant water, rust, scale and other material is flushed out of the system.

d. Operators involved in the seasonal extraction of honey or processing of other bee products must check and flush their reticulation system before pre-season cleaning is undertaken.

4.4.4.2 Procedures for non-complying water

All operations requiring the use of potable water must cease when:

- the independent supplier (e.g. local council) advises the operator that the water is not fit for drinking without additional treatment, or the operator has reason to believe that the water is not fit for use, and the operator has no other means described in the risk management programme to ensure the water is potable at the point of use; or
- if water used is supplied by the operator, and the operator fails to comply with any of the requirements of the water management plan (including corrective actions), and has no other means described in the risk management programme to ensure the water meets the original standard at the point of use.

4.4.4.3 Handling and disposition of contaminated materials

When contamination with non-potable water occurs, the following actions must be carried out:

- affected edible bee product must not be used for human consumption;
- affected product contact surfaces must be cleaned and sanitised prior to reuse; and

- affected packaging materials that cannot be effectively cleaned and sanitised must not be used for packing of any edible bee product.

4.4.5 Additional requirements for water from an independent supply with additional treatment.

In addition to the requirements given in section 4.4.4 of this document, a water management plan must be documented and implemented for water from an independent supply with additional treatment. It must include:

- information on any additional treatments (including type of treatment; parameters; procedures for control, monitoring/testing; acceptable limits);
- a water sampling and testing programme for monitoring the effectiveness of the specific water treatment applied (as indicated in Table 2 or as necessary for the effective monitoring of any specific water treatment applied); and
- corrective action procedures when the water source is found to be unsatisfactory based on the results of any test done.

Examples of additional treatment that may be applied by the operator for water from an independent supply (e.g. council or town supply) are: chlorination, ultraviolet treatment, heating and filtration. The operator should discuss with the supplier of the particular treatment, the types and frequency of water testing necessary to confirm the effectiveness of the treatment and ensure that it does not adversely affect the quality of the water (e.g. clogging of filters).

4.4.6 Additional requirements for water supplied by the operator for own use

4.4.6.1 Water management plan

In addition to the requirements given in section 4.4.4 of this document, a water management plan must be documented and implemented for water that is supplied by the operator for their own use. It must include:

- an initial assessment of the water supply status by the operator by completing the *Checklist: Assessment of Water Supply Status* given in Schedule 1 of the current version of the Animal Products (Specifications for Products Intended for Human Consumption) Notice;

[A copy of the checklist is available in Appendix 2, which is provided as a separate document to this Part for ease of downloading and use.]

- information on any additional treatments (including type of treatment; parameters; procedures for control, monitoring/testing; acceptable limits);
- a water sampling and testing programme (as indicated in Table 2 or as necessary for the effective monitoring of any specific water treatment applied); and
- corrective action plan for water source, including the consideration for applying additional treatments, when water source is assessed as unsatisfactory based on the outcome of the checklist and/or the results of any tests done.

Schedule 1 is used to determine whether the water source is secure or satisfactory, and if additional treatment and/or other corrective action must be applied by the operator.

Guidance on ways to keep roof water safe is provided in *Water Collection Tanks and Safe Household Water*, Ministry of Health, August 1999 (code 10148). Guidance on protecting bore and well water is provided in *Secure Ground Water (Bores and Wells) For Safe Household Water*, Ministry of Health, March 2000 (code 1129). For more information on water safety and tank installation, read *Household Water Supplies* (code 4602), available from your local public health service or your local authority (council).

If you are concerned about your water supply, contact a Health Protection Officer at your local public health service or an Environment Health Officer at your local council. They will be able to recommend a local water testing laboratory.

4.4.6.2 Water sampling and testing

a. Potable water at the point of use must meet the criteria set out in Table 1. The minimum testing frequency required is given in Table 2.

b. Microbiological testing must be done by a LAS (Laboratory Accredited Scheme) laboratory registered for the required analysis, or a laboratory with persons who are accredited as signatories for the required analysis.

c. Water samplers must be trained by or receive instruction on how to correctly sample water from the laboratory selected.

d. Chlorine, pH and turbidity measurements must be performed by a suitably skilled person using documented methodologies (including calibration procedures) and/or calibrated equipment.

Table 2: Frequency of Testing

Type of operation	Microbiological testing	Turbidity testing	pH testing (for chlorinated water)	Chlorine testing (for chlorinated water)
Honey extractors, packers and processors that operate on a seasonal basis (i.e. 0 - 6 months during the honey flow)	1 test per year done before the start of the season *	1 test per year done before the start of the season *	1 test per year done before the start of the season *	Daily
Honey extractors, processors and packers that operate for 6 months or more	1 test per 6 months	1 test per 6 months	1 test per 6 months	Daily

* Water testing must be undertaken and acceptable results obtained before pre-season cleaning of the premises, facilities and equipment.

4.4.6.3 Reassessment of the status of operator supplied water

The potable water supply must be reassessed by operators who supply their own water by completing the *Checklist: Assessment of Water Supply Status* at least once every 3 years and within the time specified as follows:

- in the case of a new source of water being used (that is, the source changes or a new source is added), the checklist is completed prior to use of the water; and
- in the case of any changes to the environment on or around the water source that may affect the water quality, the checklist is completed within 1 month.

4.4.7 Monitoring

Compliance with these procedures must be regularly checked by the responsible person.

4.5 Records

Records containing the following information must be kept by the operator:

- completed Checklist: Assessment of Water Supply Status (for operator supplied water)
- water management plan, if applicable
- water testing results, if applicable
- observations from monitoring, any water treatment applied, and any corrective action taken.

5 Cleaning and Sanitation

Amendment 1

March 2006

5.1 Purpose and scope

To ensure the effective maintenance, cleaning and sanitation of the premises, facilities and equipment to prevent or minimise the contamination of edible bee products.

5.2 Sources of hazards

Source	Examples of hazards
Facilities and equipment	Bacterial pathogens, e.g. *Listeria* spp., *E.coli* spp.
Waste	Bacterial pathogens, e.g. *E. coli* spp., *Salmonella* spp.
Cleaning chemicals	Chemical residues
Cleaning implements (e.g. mops, rags)	Bacterial pathogens, e.g. *Listeria* spp., *E.coli* spp.

5.3 Mandatory requirements

5.3.1 AP Reg 11

All operators must establish and carry out procedures to:

- ensure appropriate and adequate maintenance, cleaning, and sanitation of processing premises, facilities, essential services, and equipment (including conveyances);
- manage waste; and
- control pests.

5.3.2 HC Spec 21(1)

Only approved maintenance compounds may be used during processing operations or in the maintenance of processing areas, facilities and equipment.

5.4 Procedures

5.4.1 Pre-season cleaning and maintenance check for extraction premises

5.4.1.1 Before the start of each extraction season, a complete and thorough cleaning of the extraction premises, facilities and equipment must be carried out. All facilities, essential services (e.g. water, power) and equipment must be checked to ensure that they are in good working order ready for operation to commence.

A record that these tasks have been completed must be kept by the operator. An example of a pre-season checklist is given in Appendix 1. [A copy of the checklist is available as a separate document to this Part for ease of downloading and use].

5.4.1.2 All materials and items that may have been stored in the hot room or store room, and extraction room during the off-season that are not necessary for the extraction operation must be removed from the rooms.

5.4.1.3 Walls, floor, ceiling, windows, doors, light fixtures, sinks, fans, bee escapes and other fixtures must be cleaned with suitable cleaning agents so that they are visibly clean and free of honey and bee product residues, dirt, dust, moulds, insect parts and waste, and other debris.

The condition of the floor and walls should be checked. They may need to be resealed.

5.4.1.4 All product contact surfaces, including equipment, containers and other implements, must be washed with a suitable detergent, sanitised, rinsed, drained and allowed to dry.

5.4.1.5 External areas surrounding the buildings and access ways must be cleaned and tidied. They must be free from any evidence of pest infestation or accumulated waste.

5.4.2 Cleaning during operations in the extraction, processing and packing areas

5.4.2.1 Wet cloths may be used for the ongoing wiping of external surfaces of equipment to remove honey residue. The cloths must be maintained in a clean and sound condition. Water contained in buckets for rinsing wiping cloths must be replaced often.

Wiping cloths must not be used for wiping contaminated surfaces such as the floor. They must be washed with detergent and sanitised daily.

It is common industry practice to replace the water in buckets every hour or more frequently when the water becomes visibly ‘dirty’. Wiping cloths should be sanitised by soaking in an approved sanitiser or in chlorinated water.

5.4.2.2 Honey spills on the processing floor must be cleaned up immediately. Spilt honey must not be used for human consumption. Provided it is not contaminated with any chemical substance, spilt honey may be used for animal consumption. Any contaminated honey must be clearly identified as “Not Intended for Human Consumption”.

5.4.2.3 Waste must be collected in identified waste containers and must not be allowed to accumulate where it can contaminate any edible bee product or product contact surfaces.

5.4.3 Cleaning at end of day in the extraction, processing and packing areas

5.4.3.1 Products, packaging material and other materials that may be contaminated during wash down must be removed from the area and stored in appropriate locations, or they must be protected by covering them.

5.4.3.2 Waste collected during the day must be removed from the area and disposed of appropriately in designated waste bins.

5.4.3.3 Floors must be cleaned by hosing or other effective means. Water must be drained or removed completely.

5.4.3.4 Visible contamination on walls must be removed by hosing, wiping with clean wet cloths or by other effective means.

5.4.3.5 Refrigerated processing rooms must be kept free of condensates.

5.4.3.6 Equipment, including the pricker/loosener, uncapper, extractor, sump, conveyors, and work tables, must be washed and sanitised whenever it is necessary to:

- enable the effective performance of the particular task;
- remove residual honey that is contaminated with a hazard;
- remove the buildup of foreign matter (e.g. wax, insects, and other debris);
- prevent pest contamination of the honey; and
- satisfy commercial requirements (e.g. switching to organic).

5.4.3.7 External surfaces of all equipment must be cleaned so they are visibly clean and free of honey and bee product residues, dirt, dust, moulds, insect parts and waste, and other debris.

External surfaces of equipment are generally wiped clean with wet cloths, or hosed down as necessary.

5.4.3.8 Dead and live bees must be removed from the extraction, processing, and packing rooms.

5.4.4 Cleaning of storage areas

5.4.4.1 Packed products, raw materials, packaging and other materials must be stacked and stored in a tidy manner. Adequate space must be available to allow effective cleaning in the storage area.

Packed products, raw materials, packaging and other materials should be stored off the floor, e.g. use clean pallets.

5.4.4.2 Spills must be cleaned up immediately.

5.4.4.3 Damaged packaged products and other materials must be removed and disposed of as soon as possible.

5.4.4.4 Dry stores must be kept dry and must be cleaned regularly by sweeping or vacuuming.

5.4.5 **End of season cleaning and off-season maintenance**

5.4.5.1 Facilities, walls, floor, ceiling, windows, doors, light fixtures, fans, bee escapes and other fixtures must be cleaned with suitable cleaning agents so that they are visibly clean and free of honey and bee product residues, insect parts and waste, and other debris.

5.4.5.2 Equipment must be disassembled as necessary, thoroughly cleaned by washing, and dried to ensure that there is no honey residue that may attract pests and allow mould growth.

5.4.5.3 The following materials must not be stored in the hot room, extraction room, or any other processing room:

- poisonous chemicals (e.g. solvents, insecticides, paint, fuel);
- items heavily contaminated with soil, dirt, waste and other contaminants;
- any organic material (e.g. fruits) that may deteriorate and cause microbiological contamination and pest infestation; and
- any other material that could leave residual contaminants after the pre-season cleaning.

5.4.5.4 External areas must be maintained in a tidy condition so as not to attract pests and allow infestation.

The operator should do maintenance work on facilities and equipment during the off-season.

5.4.6 Cleaning of amenities

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

5.4.7 Maintenance of cleaning equipment

Cleaning implements and equipment must be maintained in a hygienic condition and must not introduce any hazard or foreign object to any edible bee product, packaging or product contact surface.

5.4.8 Monitoring

Compliance to documented procedures and the effectiveness of the cleaning programme must be regularly checked by the responsible person.

5.5 Records

Records containing the following information must be kept by the operator:

- cleaning records
- pre-season cleaning checklist, as applicable.

Records may be kept in a daily diary, logbook, record form or checklist. Refer to Section 11 for record keeping requirements.

6 Personnel Competency, Health and Hygiene

Amendment 1

March 2006

6.1 Purpose and scope

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

6.2 Sources of hazards

Source	Hazard
Person	Bacterial pathogens, e.g. *Salmonella* spp*, E. coli* spp*., Staphylococcus aureus* Hepatitis A virus
Clothing/footwear	Bacterial pathogens, e.g. *Salmonella* spp*, E. coli* spp*., Clostridium* spp*.*
Personal items (e.g. jewellery, pens, hair clips,)	Metal objects

6.3 Mandatory requirements

6.3.1 RMP Spec 13 (2)

The operator must document the competencies needed by:

- the day-to-day manager;
- those persons authorising all or part of the risk management programme; and
- those persons performing key tasks under the risk management programme including monitoring, corrective action, and operator verification.

6.3.2 RMP Spec 13(3)

The operator must keep records demonstrating that the competencies mentioned in 6.3.1 have been achieved and maintained.

6.3.3 AP Reg 12

The operator must ensure that all personnel whose presence or action within the premises may result in contamination of edible bee product:

- wear appropriate protective clothing, where necessary;
- follow an appropriate personal hygiene routine; and
- behave in such a manner as necessary to minimise contamination of edible bee product, other inputs, packaging and the processing environment.

6.3.4 HC Spec 23(1)

The operator must take reasonable measures to ensure that a person (including any visitor or contractor) who is:

- infected with, or a carrier of, an infectious disease in a communicable form as described in Section A, Part 1, of the First Schedule of the Health Act 1956, and that is likely to be transmitted through edible bee products or associated things; or
- suffering from acute respiratory infection; or
- suffering from boils, sores, infected wounds, or any other condition that cannot be adequately prevented from becoming a source of contamination;
- does not work as a product handler in, or enter, an area where he or she may adversely affect the fitness for intended purpose of edible bee product.

6.3.5 HC Spec 23(2)

A product handler suffering from an illness described in HC Spec 23 (1) must provide a certificate from a registered medical practitioner confirming that he/she is no longer likely to be a source of contamination, prior to resuming work involving the handling of food and food contact materials.

6.3.6 HC Spec 23(3)

A product handler suffering from boils, sores or infected wounds or any other condition that cannot be adequately prevented from being a source of contamination must be assessed by a suitably skilled person to confirm that the worker is no longer likely to be a source of

contamination, or he/she is adequately protected from being a source of contamination, before being allowed to work involving the handling of edible bee product and product contact materials.

6.4 Procedures

6.4.1 Competencies

6.4.1.1 The day-to-day manager or person authorising all or part of the RMP must be familiar with the documented risk management programme and have the following competencies:

- have knowledge in food safety, and hygienic procedures and practices documented in this code of practice;
- have knowledge in regulatory requirements, including responsibilities, related to the effective development and implementation of the risk management programme;
- have technical knowledge and experience in the particular product/process; and
- able to liaise and communicate effectively with workers and the regulator.

6.4.1.2 Workers performing key tasks including monitoring, corrective action, and operator verification must have the following competencies:

- have knowledge and skill in executing the particular task; and
- be familiar and able to consistently comply with hygienic practices and procedures.

6.4.2 Induction and on-going supervision of workers

6.4.2.1 New workers must be informed of their job description, health requirements, and hygienic practices and procedures before starting work.

6.4.2.2 Ongoing supervision and/or training must be provided to ensure that new workers are adequately trained on their specific tasks and on hygienic practices and procedures.

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.

6.4.3 Health of workers

6.4.3.1 Workers must inform the person responsible for operations if he/she is suffering from diarrhoea, acute respiratory infection; or is diagnosed with illness caused by *Salmonella*, *Shigella* spp., *E. coli* spp., *Campylobacter*, Hepatitis A virus infection or other infections likely to be transmissible via food.

6.4.3.2 Any injury, wound, or cut must be treated immediately and dressed with a secure waterproof dressing to prevent the contamination of any product, packaging or equipment with blood or other fluid discharge. The dressing must be maintained in a sanitary condition and adequately secured to avoid dislodgement.

Refer to the NZFSA sickness policy template . This document provides useful guidance for managing ill persons in your business. Note also that “Acute respiratory infections” are not considered to include the common cold or ‘flu as these are not transmissible by food and a medical certificate is not required before resumption of work after suffering from these illnesses.

6.4.4 Hygienic practices

6.4.4.1 All personnel who enter any processing or packing areas must wear suitable clean protective clothing and foot wear. Protective clothing (e.g. coats, overalls, aprons) must be visibly clean at the start of each day’s operation.

Foot wear must be suitably clean so it does not cause soil, mud, grass and other plant material, and other dirty material to be brought into processing and packing areas.

Hair covering (e.g. cap) should be worn by workers involved in the processing and packing of honey.

6.4.4.2 All personnel must thoroughly wash and dry hands and exposed portions of the arms with hand detergent and water:

- before entering any processing or packing areas;
- before handling any product or exposed packaging;
- after using the toilet;
- after handling or coming into contact with waste and contaminated surfaces or material; or
- after hand contamination from coughing, sneezing, and blowing the nose.

Hand washing water in buckets may be used by workers during processing only for the purpose of removing sticky honey residues on hands. It must not be used for washing contaminated hands (i.e. as covered in 6.4.4.2). Water must be changed on a regular basis and must not become a source of contamination.

6.4.4.3 The following activities are not allowed inside processing or packing areas:

- eating of any food;
- smoking;
- spitting; or
- any other activity that may cause the contamination of any product and product contact surfaces.

Individual water bottles may be used by personnel working in the extraction area. A clean disposable utensil should be used for tasting honey.

6.4.4.4 Workers involved in the handling of edible bee product must not wear any jewellery except plain wedding bands (i.e. no stone). Plain wedding bands may be worn provided they cannot be easily dislodged and they can be effectively cleaned in the same manner as hands.

6.4.4.5 Personal items such as lollies and cigarettes must not be taken into processing or packing areas.

6.4.5 Visitors and contractors

6.4.5.1 Visitors and contractors must report to the responsible person on arrival at the premises. They must be supervised by an assigned staff while within the premises. It is the responsibility of the assigned staff to ensure that hygienic practices and procedures are followed by the visitor or contractor.

Visitors and contractors who will enter a processing or packing area should sign a visitor's logbook on arrival.

6.4.5.2 Visitors and contractors must not be allowed to handle edible bee product in processing and packing areas unless they have complied with all the hygiene requirements for product handlers.

6.4.6 Handling and disposition of contaminated materials

When contamination from blood or any body discharge occurs, the following actions must be carried out:

- affected product must be considered unfit for human or animal consumption;
- affected product contact surfaces must be cleaned and sanitised prior to reuse; and
- affected packaging materials that cannot be effectively cleaned and sanitised must not be used for packing of any edible bee product.

6.4.7 Monitoring

Compliance to documented procedures must be regularly checked by the responsible person.

6.5 Records

Records giving the following information must be kept by the operator:

- any medical certificates
- induction or training of personnel
- monitoring records of compliance to hygienic practices and/or of any problems observed and any corrective action taken (including restoration of control, product disposition and prevention of recurrence).

Records may be kept in a daily diary, logbook, record form or checklist. Refer to Section 11 for record keeping requirements.

7 Control of Chemicals

Amendment 1

March 2006

7.1 Purpose and scope

To ensure the proper use and storage of chemicals to prevent or minimise the contamination of edible bee products, packaging, equipment, or processing environment. Chemicals include maintenance compounds used for cleaning, sanitation, fumigation, pest control, and the repairs and maintenance of equipment.

7.2 Sources of hazards

Source	Examples of hazards
Maintenance compounds (e.g. cleaning agents, pesticides, lubricants)	Chemical residues
Chemical containers	Chemical residues

7.3 Mandatory requirements

7.3.1 HC Spec 21(1)

Only approved maintenance compounds may be used during processing operations or in the maintenance of processing areas, facilities and equipment.

7.3.2 HC Spec 21 (2)

All containers of chemicals held and used within the premises must be labelled with the name of the chemical as they appear in the list of approved maintenance compounds contained in specifications.

7.3.3 AP Reg 11(3)

Chemicals must be stored, handled, and used in a manner that minimises contamination of honey and other bee products, other inputs, packaging, equipment, and the processing environment.

7.4 Procedures

7.4.1 Approved chemicals

A list of all approved chemicals used and held in the premises must be maintained.

All chemicals should be checked during purchase or upon receipt to confirm that they are in the Approved List or the supplier is able to provide an approval letter from the NZFSA.

7.4.2 Storage

7.4.2.1 Chemicals must be stored in a designated area (e.g. shelf, cupboard, room) and kept separate from edible bee products, ingredients, and packaging.

7.4.2.2 Chemicals must be kept in sealed containers when not in use.

7.4.2.3 All containers and implements used for measuring or pouring of chemicals must be clearly identified (e.g. labelled as 'For Chemicals Only') to ensure no secondary use of these containers.

7.4.2.4 Storage areas must be kept clean and tidy.

7.4.3 Use

7.4.3.1 All chemicals must be used according to the directions of the manufacturer and the conditions of the NZFSA approval. Directions for use must be readily available to the user (e.g. given in the label, posted on the wall or in product information data sheets).

7.4.3.2 Chemicals must be handled and used by or under the supervision of suitably trained or experienced personnel.

7.4.3.3 Products and exposed packaging must be removed from the area or kept protected (e.g. covered) prior to the use of chemicals which may result to their contamination.

7.4.3.4 Equipment and other product contact surfaces must be cleaned by thorough washing after exposure to any chemical (i.e. after spraying with insecticide is completed).

7.4.4 Handling and disposition of contaminated materials

7.4.4.1 Empty chemical containers must be disposed of in accordance with manufacturer's instructions.

7.4.4.2 Empty chemical containers must not be re-used for any other purpose within the premises.

7.4.4.3 When chemical contamination occurs, the following actions must be carried out:

- affected products must be considered unfit for human or animal consumption;
- affected food contact surfaces must be cleaned and sanitised prior to reuse; and
- affected packaging materials that cannot be effectively cleaned and sanitised must not be used for packing of any edible bee product.

7.4.5 Monitoring

Compliance to documented procedures must be regularly checked by the responsible person.

7.5 Records

Records giving the following information must be kept by the operator:

- list of approved chemicals used and held in the premises
- records of any problems detected and any corrective action taken (including restoration of control, product disposition and prevention of recurrence).

Records may be kept in a daily diary, logbook, record form or checklist.

Refer to Section 11 for record keeping requirements.

8 Pest Control

Amendment 1

March 2006

8.1 Purpose and scope

To ensure the effective control of pests so as to prevent or minimise the contamination of edible bee products, packaging, other inputs, equipment, and the processing environment. Pests include rodents, birds, insects (including bees), dogs and cats.

8.2 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

8.3 Mandatory requirements

8.3.1 AP Reg 11 (2) (3)

Effective procedures must be established and carried out to minimise the exposure of edible bee product, packaging, other inputs, equipment, and the processing environment to hazards associated with pests.

8.3.2 AP Reg 10

Premises, facilities, equipment and essential services must be designed, constructed, located and operated to minimise the exposure of edible bee product to hazards and other risk factors from pests.

8.3.3 AP Reg 11(3)

Chemicals must be stored, handled, and used in a manner that minimises contamination of edible bee product, other inputs, packaging, equipment, and the processing environment.

8.4 Procedures

The operator may employ a pest control person or agency to develop and implement a pest control system (e.g. set up traps, spraying programme) and monitor the premises. The operator is responsible for ensuring that the person or agency responsible is competent to perform the task.

8.4.1 Prevention of infestation and access of pests

8.4.1.1 Buildings and storage facilities (including water storage tanks) must be kept in good repair and condition to prevent pest access and to eliminate potential breeding sites.

8.4.1.2 Holes, drains and other places where pests are likely to gain access must be kept sealed, or provided with screens or similar materials that prevent the entry of pests.

Mesh screens should be used on windows, doors, ventilators and other openings in the processing and packing areas that may be kept open during operations, to prevent the entry of insects, birds, and other pests.

8.4.1.3 External doors that are not screened must be kept closed at all times when not in use.

8.4.1.4 Internal and external areas of the premises must be kept clean and tidy. The external environment must be checked regularly and kept free of any food source and breeding sites (e.g. long grass, bird's nest).

Areas that are likely to attract flies and other insects should be sprayed, as necessary.

8.4.1.5 Dogs, cats and other mammalian pests must not be permitted to enter processing, packaging and storage areas.

8.4.1.6 Waste materials must be kept in covered pest-proof containers, and regularly collected and disposed of.

8.4.2 Use of pesticides

8.4.2.1 Pest control chemicals (rodenticides and insecticides) must be handled, used and stored according to the control procedures given in Section 6: Control of Chemicals.

8.4.2.2 Insecticides that have any residual activity or are dispensed as continuous aerosols must not be used in any processing or storage area in a manner that could cause the contamination of edible bee product or product contact surfaces.

8.4.2.3 Edible bee products and exposed packaging must be removed from the area or kept protected (e.g. covered) prior to the use of chemicals which may result to their contamination. Equipment and other product contact surfaces must be cleaned by thorough washing after exposure to any chemical (i.e. after spraying with insecticide is completed).

8.4.3 Use of pest traps

8.4.3.1 Pest traps (including rodent boxes, bait stations and electric insect traps) must be located where they do not present a risk of contamination to the product.

8.4.3.2 Bait stations must not be located inside any processing area.

The location of pest traps should be identified on a site or building plan, or other suitable record.

8.4.3.3 Rodenticides must be used only in enclosed bait boxes.

8.4.3.4 Bait stations must be checked regularly for the following:

- correct location as indicated in the plan or record, and presence of bait. The box should be cleaned and rebaited with an approved rodent bait, as necessary;
- evidence of pest activity (e.g. nibbled bait, bait missing, droppings); and
- boxes are in good working condition and numbering is easily legible.

The frequency for monitoring of traps should be determined relative to the type of trap and the degree of pest activity noted. Increased monitoring and appropriate corrective actions should be implemented when increased rodent activity is observed.

8.4.3.5 Insect traps, which include ultra-violet lamps, pheromone traps and any form of attractant device, must:

- be constructed so they catch and secure insects in a suitable drawer, tray or adhesive mat which facilitates the capture and removal of insects;
- not cause any air-borne contamination; and
- be sited so there is no contamination from insects falling on to edible bee product, packaging, or product contact surfaces.

8.4.4 Handling and disposition of contaminated materials

Where there is evidence of contamination from pests (excluding bees), the following actions must be carried out:

- the affected product must be considered unfit for human consumption;
- the affected product contact surfaces must be cleaned and sanitised prior to reuse; and
- affected packaging materials that cannot be effectively cleaned and sanitised must not be used for packing of any edible bee product.

8.4.5 Monitoring

Ongoing compliance to documented procedures, and the effectiveness of the pest control programme must be regularly checked by the responsible person.

8.5 Records

Records containing the following information must be kept by the operator:

- observations from monitoring, including any evidence of pests
- location of bait stations
- list of approved chemicals used
- name, amount and point of use of any pesticides used; and
- any corrective action taken (including restoration of control, product disposition and prevention of recurrence).

Records may be kept in a daily diary, logbook, record form or checklist.

Refer to Section 11 for record keeping requirements.

9 Packaging Materials (Specifications, Storage & Handling)

Amendment 1

March 2006

9.1 Purpose and scope

To ensure that packaging materials used for containing edible bee products are fit for their intended purpose.

9.2 Sources of hazards

Source	Hazard
Metal drums	Metal, chemical residues
Plastic packaging	Chemical residues
Glass bottles	Glass

9.3 Mandatory requirements

9.3.1 HC Spec 30 (1)

Packaging must:

- comply with the current US Code of Federal Regulations, Title 21, Parts 170–199 (21 CFR 170–199); or
- comply with the current "Australian Standard for Plastics Materials for Food Contact Use, Australian Standard AS2070–1999"; or
- be determined by the operator to be suitable for use, based on an analysis of hazards and other risk factors from the packaging.

9.3.2 HC Spec 30 (3)

If the packaging is damaged such that the fitness for intended purpose of edible bee product may be affected, the product must be appropriately disposed of or handled in a manner that minimises contamination until the damage to the packaging is rectified.

9.3.3 HC Spec 30 (4)

Reused and recycled packaging must not be a source of contamination to edible bee products.

The Australia New Zealand Food Standards Code does not specify details of materials permitted to be added to or used to produce food packaging materials. However, the effect of the New Zealand Food Act 1981 section 9(4)(c) is that packaging when used must not cause food to be unsafe or tainted.

Therefore, it is the responsibility of food manufacturers and sellers to ensure their products are safe and that they comply with relevant legislation. In practice, packaging suppliers will need to ensure their products are suitable for the intended use. Compliance with recognised international food standards such as those of the European Union (EU) or the United States Food and Drug Administration would be reasonable evidence that materials are suitable for food use.

9.4 Procedures

9.4.1 Metal drums

9.4.1.1 Construction

All metal drums, including new, reused and reconditioned drums, must be coated or lined with a food grade coating. The coating must:

- provide a barrier between the metal surface of the drum and honey;
- be inert;
- not impart any flavour to honey;
- be suitable for acidic foods such as honey; and

- be resistant to delamination, flaking or peeling.

The internal lining should be approved by the US FDA under Code of Regulations 175.300. For drums that are to be reused, a heavy duty lining, such as a food grade epoxy phenolic lining (Coat G), is recommended. A specification or letter confirming the suitability of the lining should be provided by the drum supplier.

9.4.1.2 Reused or reconditioned drums

a. Drums that have been used to contain non-food materials (e.g. petroleum products and other chemicals) must not be reused for honey.

Care must be taken when purchasing imported drums. Some imported closed-head drums have been used for chemicals and oils. These drums are difficult to recondition to a standard suitable for food use.

b. Reused drums that have contained other foods such as sucrose, glucose, or orange juice must be thoroughly washed and dried, in such a manner as to remove all residues of the food material, before using for honey.

Note that some open-top drums used for containing other foods (e.g. anhydrous milk fat) are designed to be used with bags. Therefore, the lining of the drum and gasket of the lids may not be suitable for contact with honey.

9.4.1.3 Inspection of drums

a. Drums must be checked for damage, deterioration and contaminants prior to use to ensure that they are suitable for containing honey.

Drums should have tightly fitted bungs. Loose bungs indicate that water and other contaminants could have entered the drums.

b. The internal surface of drums must have no cracks, rust, delaminated coatings, and other defects or damage that may impact on the safety and suitability of honey.

For closed-head drums, it is common industry practice to use a torch to view the inside of the drum. A mirror should be used to check underneath the lid.

c. Badly dented drums must not be used.

Dents can lead to cracking or delamination of the internal lining, and weakening of seams.

d. Drums that contain residues of fermented honey must be washed and dried before reuse.

9.4.1.4 Storage and handling of drums

a. Empty and full drums must be stored in a manner that prevents deterioration of the drums, and the entry of water and contaminants into the drums.

Empty and full drums should be stored under cover (i.e. inside a building or shed) whenever possible. This prevents:

- rusting which weakens the drum structure;
- contamination on the outside of the drums (e.g. dirt, dust, and other debris) which can be transferred to the honey during subsequent processing; and
- entry of moisture and other contaminants.

Empty drums that are stored outside should be held on their side and pyramid stacked with the bung facing away from the prevailing weather. They should be stored under some form of cover or under shade to prevent huge changes in temperature within the drum. A significant change in temperature or a temperature gradient within the drum will create a vacuum and allow air and moisture to be sucked into the drum.

The top of full drums that are stored outside should be covered with a plastic cover or other form of protection to prevent moisture entry, and contamination and accumulation of water and other materials on the lid (e.g. leaves, dirt, insects, bird and rodent faeces).

Empty and full drums should be stored off the ground (e.g. use pallets).

b. Drums should have properly fitted bungs that prevent the entry of moisture and other contaminants.

c. Drums must be handled and transported in such a manner that prevents dents and other forms of damage.

Drums should not be dropped or thrown around to prevent dents which can lead to cracking or delamination of the internal lining, and weakening of seams.

9.4.1.5 Washing and drying of drums

a. Potable water must be used for washing of drums.

b. Drums must be completely dried after washing and before being sealed with a bung.

To facilitate drying, washed drums should be dried in hot boxes or rooms.

9.4.2 Other bulk containers

Other bulk containers (e.g. Pallecon, Ecobulk) must comply with the relevant requirements specified in 9.4.1.

9.4.3 Plastic packaging

9.4.3.1 Plastics for food contact use must be comply with the current US Code of Federal Regulations, Title 21 or be manufactured in accordance with the Australian Standard for Plastic Materials for Food Contact Use AS 2070-1999. Plastic materials included in this Australian Standard are:

- polyethylene
- polyvinyl chloride compound (PVC)
- styrene plastics material
- acrylonitrile plastics material
- polypropylene
- poly vinylidene chloride compound (PVDC)

Letters of guarantee from suppliers are necessary for plastics. Non-food grade plastic can contain lead (extrusion die lubricant) or toxic plasticizers which can contaminate honey.

9.4.3.2 Packaging materials must be adequately protected during transport to the premises and during storage, against dust, pest and other contaminants, and physical damage.

9.4.4 Glass jars

9.4.4.1 Metals lids must be coated or lined with a food grade material suitable for an acidic food such as honey.

9.4.4.2 Glass jars must be adequately protected during transport to the premises and during storage, against dust, pest and other contaminants, and physical damage.

Glass jars should be stored in an inverted position.

9.4.4.3 Glass jars must be handled in manner that does not cause any breakage or other damage.

9.4.4.4 Broken glass must be removed and discarded immediately. A thorough check must be carried out to ensure that all broken pieces are removed.

9.5 Monitoring

Ongoing compliance to documented procedures must be regularly checked by the responsible person.

9.6 Records

Records giving the following information must be kept by the operator:

- letters of guarantee from suppliers
- records of any problems detected and any corrective action taken (including restoration of control, product disposition and prevention of recurrence).

Records may be kept in a daily diary, logbook, record form or checklist. Refer to Section 11 for record keeping requirements.

10 Receipt and Processing of Honey and Dried Pollen

Amendment 1

March 2006

10.1 Purpose and scope

To ensure that honey or any other edible bee product that is received for processing is fit for its intended purpose and meets the requirements of the current version of the Animal Products (Specifications for Products Intended for Human Consumption) Notice clause 108.

To ensure that honey or any other edible bee product is processed in a manner that minimises its contamination and deterioration, and maintains its fitness for intended purpose.

10.2 Mandatory requirements

10.2.1 HC Spec 108

Note: The “Apiarist and Beekeeper Statement” or “statement” referred to in this clause is commonly called a “Harvest Declaration” by industry.

1. An apiarist or beekeeper must ensure that:

    a. honey and other bee products are not harvested from beehives in areas where it is likely that the resulting product will be contaminated with harmful levels of phytotoxins of the native plant tutu (*Coriaria arborea*):

    b. only approved veterinary medicines or agricultural compounds are used in beehives in accordance with any label or approval conditions:

    c. beehives are constructed of, and maintained with, materials that are not a source of hazard to the honey or other bee products:

    d. honey supers, both before and after extraction, and honey containers, including drums, are stored in a manner that will minimise contamination:

e. honey supers are protected from contamination during transportation to minimise the exposure to dust, fumes and other contaminants.

2. If the apiarist or beekeeper has reason to believe that the honey or other bee products would exceed any Maximum Residue Limit (MRL) or Maximum Permissible Level (MPL), that person must not present the honey or bee products for processing.

3. An apiarist or beekeeper must complete and sign a statement ass et out in the form approved by the Director – General for each lot of honey or other bee products and keep a copy of every statement for a minimum of 4 years, except where subclause (6) applies.

4. An apiarist or beekeeper must provide a copy of the statement to the secondary processor with each consignment of honey or other bee products before processing by the secondary processor commences.

5. If the apiarist or beekeeper cannot ensure that the honey or other bee products have been harvested in accordance with the requirements of subclause (1) regarding plant toxins, agricultural compounds and veterinary medicines, the affected honey or other bee products must not be processed for human consumption or traded, unless the apiarist or beekeeper or processor has obtained prior written approval from the Director-General. The Director-General may impose conditions on the approval, and the apiarist, beekeeper or processor must comply with those conditions.

6. Where an apiarist or beekeeper processes honey or other bee products themselves for trade, then the apiarist or beekeeper may keep records containing the information required by the statement, instead of the statement.

7. Where a statement is received by a secondary processor which indicates that the honey or other bee product may not be suitable for consumption without further processing, this information must be provided to subsequent processors unless the material is processed by that processor such that it is no longer a risk to human health.

10.2.2 AP Reg 9

The operator must ensure that honey and other bee products in their charge are processed in a manner that minimises their contamination or deterioration.

10.2.3 HC Spec 32 (3)

Labelling must be provided on transportation outers and must state:

- the product name or description;
- storage directions, where necessary to maintain the product as fit for intended purpose;
- lot identification (except that this requirement is optional if the application of lot identification to the retail packaging is a mandatory requirement under other legislation and that legislation is complied with).

10.2.4 HC Spec 32 (4)

Mandatory labelling must be clear, legible, indelible, and use terms that are commonly used in the English language or other language approved by the Director-General.

10.2.5 HC Spec 32(5)

The label of the transportation outer, or accompanying documentation, of any bee product that is not intended for human consumption but has the appearance of, or could be mistaken for, product that is intended for human consumption, must clearly indicate that the bee product it contains is not intended for human consumption.

10.2.6 HC Spec 32B

If the status of honey or other bee product's fitness for intended purpose changes, and the product has been identified, all affected labelling or the accompanying documentation (where there is no label) must be amended to reflect its new status prior to its release for trade, or the packaging (including labelling) must be replaced.

If honey or bee products are downgraded and is no longer intended to be traded for human consumption, any labelling on the transportation outer, accompanying documentation, inspection legends and any other identification of product as being suitable for processing for human consumption or as being fit for human consumption must be removed or defaced at the consigning premises.

Any false or misleading labelling on reused or recycled packaging resulting from previous uses must be removed or defaced at the consigning premises.

10.2.7 HC Spec 34(3)

An inventory control programme must be documented for animal material and product and records maintained.

10.3 Procedures for the receipt of honey, pollen and other bee products

Note: The “Apiarist and Beekeeper Statement” or “statement” referred to in this section is commonly called as “Harvest Declaration” by industry.

10.3.1 Each consignment or lot of honey supers, pollen or other bee product must not be processed without an *Apiarist and Beekeeper Statement* indicating that it is suitable for processing for human consumption.

When an apiarist or beekeeper extracts honey from supers from her/his own apiary, an Apiarist and Beekeeper Statement does not need to be completed provided all the information required by the statement is recorded in some form by the apiarist or beekeeper.

10.3.2 When the *Apiarist and Beekeeper Statement* indicates that the honey, pollen, or other bee product is not suitable for processing for human consumption (i.e. the statement has a ‘No’ answer), it must not be processed unless a written approval from the Director-General is obtained by the apiarist, beekeeper or processor.

10.3.3 Each consignment or lot of honey supers, pollen, or other bee product must be clearly identified so that it can be easily linked to the *Apiarist and Beekeeper Statement*.

10.4 Procedures for the processing of honey

10.4.1 **Receiving of supers**

10.4.1.1 When the loading bay is located inside the building, measures must be taken to prevent contamination of materials, products, and the processing environment from dust, dirt, bees and other insects, fumes, and other environmental contaminants during the entry and exit of vehicles, and during unloading.

Processing rooms that open to the loading bay area should have a door that is kept closed when vehicles enter and exit, and during unloading of honey supers.

10.4.1.2 Supers must be transported on clean trucks and covered during transport in a manner that minimises dust, engine fumes and other road-based contamination.

10.4.1.3 Honey supers that are infested, excessively dirty, or contaminated with faecal material (e.g. rodent or bird faeces) must not be accepted for processing.

Beekeepers should implement hygienic practices for the handling, storage and transport of honey supers to minimise contamination of the supers which consequently impacts on the microbiological load of honey.

Full or empty supers should be protected during storage from contamination from pests, wastes, and environmental contaminants.

10.4.2 Holding of full honey supers

10.4.2.1 Full honey supers must be stored in a suitable storage area or hot room.

10.4.2.2 Supers that are not stored in a room or will not be processed immediately must be protected from moisture and contamination from dust, dirt, bees and other insects, fumes and other environmental contaminants.

10.4.2.3 Entry of live bees into the storage area, hot room or extraction room must be minimised.

10.4.3 Deboxing and uncapping

10.4.3.1 Deboxing must be done in a manner that will minimise transfer of contamination from boxes to combs.

Combs should be visually inspected to ensure that contaminated combs are removed and excluded from processing. Combs that have the following condition should be excluded from processing:
infested with wax moth larvae;
contain dead brood (bee larvae); or
with signs of rodent infestation (e.g. faecal pellets, urine odour).

10.4.3.2 Uncapping equipment (i.e. knives, blades, hoses, clamps) must be in a hygienic and good working condition that does not allow water, steam or lubricant to leak into honey.

10.4.3.3 When the uncapper is defective, uncapping must cease until the problem is fixed.

10.4.4 Extraction

10.4.4.1 The extractor must be clean and dry before the start of extraction.

10.4.4.2 Wax, caramelised honey, and foreign matter (e.g. wax, dirt, dead bees) must not be allowed to build up in the extractor.

The frequency for cleaning the extractor should take into consideration the volume of honey processed, design of the equipment, quality of honey, and other technical and commercial requirements. Refer to Section 5: Cleaning and sanitation.

10.4.4.3 The extractor must be covered with a lid when not in use (e.g. overnight) to prevent the entry of pests and to prevent steam and water from contaminating honey.

10.4.4.4 Honey that has been spilt onto the processing floor must not be used for human consumption. Provided it is not contaminated with any chemical substance, spilt honey may be used for animal consumption.

Any contaminated honey must be clearly identified as “Not Intended for Human Consumption”.

10.4.5 **Transfer of honey through the sump tank**

10.4.5.1 Wax and other debris must be removed from the sump tank at least daily.

10.4.5.2 Sump tanks must be constructed and located in such a manner that prevents contamination of the honey from water (including splashes from the floor), condensates, dust and other contaminants.

The sides of the sump should extend above the floor height to prevent floor dust and other contamination entering the honey. The minimum height of the sides should be 150 mm and the preferred height 300 mm high above floor level. (From the Reference Manual of Capilano Honey Ltd)

10.4.5.3 If honey that is separated from cappings is collected, it must be added to the sump or honey tank in a hygienic manner.

10.4.6 Straining/filtering

10.4.6.1 Strainers and filters must be made of material that is suitable for food.

10.4.6.2 The mesh size of the strainer or filter must be suitable for the type of material that is being filtered from honey.

10.4.6.3 Strainers or filters must be maintained in good condition and must not be a source of contamination.

10.4.7 Holding of extracted honey in tanks

10.4.7.1 Holding tanks must be clean and dry before filling with honey.

10.4.7.2 Tanks containing honey must be protected from the entry of bees and other insects, condensates, dust and other contaminants.

10.4.8 Filling of honey into drums or other bulk containers

10.4.8.1 Drums and other bulk containers must comply with the requirements given in section 9.4.1 of this COP.

10.4.8.2 Honey must be filled into drums or other bulk containers in a manner that prevents contamination of honey.

10.4.8.3 Full drums or other bulk containers must be sealed with tightly fitted bungs.

10.4.8.4 Full drums or other bulk containers must be permanently marked or identified so that it can be easily linked to the relevant *Apiarist and Beekeeper Statement* (i.e. Harvest declaration).

10.4.9 Storage of full drums or other bulk containers

Full drums or other bulk containers must be stored in accordance with requirements given in section 9.4.1 of this COP.

10.4.10 Processing of liquid and creamed honey

10.4.10.1 The external surface of stored honey drums must be washed in an appropriate manner to minimise contamination of honey as it is removed from the drum.

10.4.10.2 Honey must be transferred into vats or tanks in a hygienic manner.

10.4.10.3 Creaming tanks must be protected from the entry of bees and other insects, condensates, dust and other contaminants.

10.4.10.4 Creaming tanks, including the mixer blade mechanism, must be in good mechanical condition and must not be a source of contamination (e.g. metal fragments, lubricants).

10.4.10.5 Starter honey must not be a source of contamination and must be mixed into the product in a hygienic manner.

10.4.11 Processing of comb honey

Comb honey poses a greater risk from tutin because it is eaten directly off the comb, increasing the chance of consuming honey with a high concentration of tutin. Comb honey processors should impose strict controls for sourcing honey combs to minimise the risk from tutin.

10.4.11.1 Combs that are infested, travel stained, dirty, contaminated with faecal matter; or contain brood or fermented honey must not be processed into comb honey.

New foundation and comb should be used for producing comb honey.

10.4.11.2 Comb honey must be inspected using a light source or similar device to detect any remaining wire or other foreign matter.

Some premises have a metal detector to eliminate any comb honey pack contaminated with metal.

10.4.11.3 Only chemicals approved as fumigants for comb honey must be used for fumigating combs to kill wax moth.

10.4.11.4 Honey combs must be adequately packed or protected during freezing to ensure that contamination from other sources is prevented.

Freezing to kill wax moth may be done off-site (i.e. outside the boundaries of the operator's risk management programme) provided the freezing operation is undertaken in a premises covered by a risk management programme under the Animal Products Act 1999.

10.4.12 Packing and labelling

10.4.12.1 Prior to filling of honey, containers must be inspected for damages (e.g. broken glass) and foreign objects.

10.4.12.2 The filling machine for liquid or creamed honey must be set up and operated correctly to prevent spillage.

10.4.12.3 The capping machine must be set up and operated correctly to prevent breakage of glass jars.

10.4.12.4 Defective packs must be segregated and disposed of appropriately in designated bins.

10.4.12.5 The label on a package of honey must meet the general labelling requirements under the Animal Products Act 1999 and the Food Standards Code.

10.4.12.6 A system must be in place for the identification and inventory of labels, segregation and removal of obsolete labels, and the prevention of incorrect labelling of products.

Representative samples of product should be collected, identified and stored for the required time period for testing and examination, if required.

10.5 Procedures for the processing of pollen

10.5.1 **Receipt of pollen**

10.5.1.1 The operator must ensure that pollen received for processing is fit for intended purpose.

10.5.1.2 Pollen must not be mouldy. Mouldy pollen is not fit for human consumption and must be discarded.

Pollen should be collected every 3 to 4 days and before any significant rain. In wet weather, pollen which becomes damp may start to grow mould and rot after 4-5 days. Pollen containers should be kept out of the sun to prevent 'sweating' and clumping of pellets, and to minimise microbiological growth.

10.5.1.3 Pollen must not be contaminated with rodent droppings and pests such as cockroaches and ants.

Processors of pollen should require their suppliers to have an effective pest control system in place at the hive and storage facilities to minimise contamination of pollen from pests. The presence of rodent droppings indicates that there is a hole in the trap or hive, or gear is being contaminated during winter storage.

10.5.1.4 The presence in pollen of dead bees, wax, insect parts, wood, dust and other foreign matter in pollen must be minimised.

10.5.2 Freezing

10.5.2.1 Fresh pollen must be placed in a freezer without unnecessary delay especially if the pollen is wet.

Freezing will prevent microbial growth and spoilage, and kill wax moth and pollen mite. Pollen should be frozen at -18 °C for at least 48 hours to destroy wax moth.

10.5.2.2 Contamination of the pollen must be prevented during freezing. Pollen must be properly packed and identified.

10.5.2.3 The freezer must have the capability to quickly freeze pollen to the required temperature.

10.5.2.4 The pollen must be loaded in the freezer in such a manner that allows effective freezing of the product.

10.5.3 Drying

10.5.3.1 Drying of pollen must be done in a manner that minimises the contamination of the product and the growth of any microorganism present in the product.

10.5.3.2 Pollen must be dried to a final moisture content sufficient for the preservation of the product considering its intended packaging and storage conditions.

Pollen is generally dried to < 8% moisture content.

10.5.4 Cleaning

Dried pollen must be cleaned to ensure that the product is free of all foreign matter such as dead bees, wax, insect parts, wood, dust, and other debris.

A simple birdseed cleaning unit which uses a vacuum cleaner for the air supply may be suitable for cleaning small quantities of pollen. Sieves can also be used. Large quantities may need to be processed in a commercial seed-cleaning machine. These contain vibrating riddles or screens which sift out the pollen into different sizes. They also have an air current to remove the dust and fine debris.

10.5.5 Storage

Pollen intended for human consumption should be stored in a deep freeze or as dried pellets in air tight containers at room temperature.

10.5.6 Labelling

The label on a package of pollen must meet the general labelling requirements under the Animal Products Act 1999 and the Food Standards Code. Food Standard 1.2.3 requires the label on a package of pollen to include an advisory statement to the effect that the product contains bee pollen which can cause severe allergic reactions.

10.6 Traceability and inventory control

10.6.1 There must be a system in place for the identification of raw materials and products, and documentation that will allow any finished product to be traced:

- back to the supplier and the apiaries that the bee product was sourced from; and
- to the next person or company that the product is transferred to for further processing, packing, or storage; distributed to; or sold to.

10.6.2 All outgoing products must be clearly identified and accompanied by appropriate documentation.

Refer to the Bee Products Official Assurances Guide for the documentation requirements for bee products for export.

10.6.3 Inventories must be maintained for all raw materials (e.g. incoming honey, pollen) and finished products, including any non-compliant materials and products.

10.7 Monitoring

Compliance to documented procedures must be regularly checked by the responsible person.

10.8 Records

Records containing the following information must be kept:

- *Apiarist and Beekeeper Statements* (Harvest Declarations) or equivalent records
- records for identifying products and establishing traceability
- inventories
- observations from monitoring and any corrective action taken (including restoration of control, product disposition and prevention of recurrence).

Records may be kept in a daily diary, logbook, record form or checklist. Refer to Section 11 for record keeping requirements.

11 Document Control and Record Keeping

Amendment 1

March 2006

11.1 Purpose and scope

To ensure that all RMP documents, including records, are managed under a document control system that meets the requirements of the Animal Products Act 1999.

11.2 Mandatory requirements

11.2.1 RMP Spec 16 (1)

Every document or part of a document that forms part of a risk management programme must be:

a. legible;

b. dated or marked to identify its version;

c. authorised prior to use, either directly or within the document control system, by:

   i. the operator,

   ii. the day-to-day manager of the programme, or

   iii. a person nominated to do so in the programme's document control system; and

d. available when required to any person with responsibilities under the programme.

11.2.2 RMP Spec 16 (2)

The operator must document the procedures for effective document control of the documents that form the risk management programme including how:

a. significant and minor amendments are made to the risk management programme so that the programme is current and reflects the actual operation;

b. the amendments, or the nature of the amendments to the programme are identified or described; and

c. documents are authorised prior to issue and use; and

d. all amended parts of the risk management programme are replaced with the current versions at all distribution points without unnecessary delay after authorisation and, where necessary, registration in accordance with section 25 of the Act.

11.2.3 RMP Spec 16(3)

The operator must retain for four years, one copy of all obsolete documents from a registered risk management programme in a manner that protects the documents from damage, deterioration or loss, and prevents confusion with current documents.

11.2.4 RMP Spec 16(4)

The operator must ensure that the registered risk management programme and all reference material relating to the risk management programme, and any archived documents are readily accessible, or can be retrieved and made available within two working days of any request to:

a. accredited persons (now called recognised persons); and

b. animal product officers; and

c. the Director-General; and

d. persons authorised by the Director-General.

11.2.5 RMP Spec 17 (1)

The operator must include record keeping procedures in the risk management programme to ensure that all records necessary to demonstrate compliance with the documented programme are legible, stored for four years in a manner which protects the records from damage, deterioration or loss and can be retrieved and made available to persons defined in clause 17(3) within two working days of any request.

11.2.6 RMP Spec 17(2)

Records relating to the risk management programme's monitoring, corrective action and operator verification activities must include:

a. the date and time of the activity;

b. a description of the results of the activity; and

c. a means to identify the person(s) who performed the activity.

11.2.7 RMP Spec 17(3)

The operator must make all records relevant to the risk management programme available to the following persons as required:

a. accredited persons (now called recognised persons);

b. animal product officers;

c. the Director-General; and

d. persons authorised by the Director-General.

11.2.8 HC Spec 34 (3)

An inventory control programme must be documented for animal material and product and records maintained.

11.3 Procedures

11.3.1 **Record keeping**

11.3.1.1 All relevant GMP and processing records must be kept, including inventories of raw materials and finished products.

11.3.1.2 All relevant electronic records must be backed up and protected from corruption, damage or loss.

11.3.1.3 Records must include the date and the signature of the responsible personnel. In the case of electronic records compiled by personnel, the person entering the data must be identified according to systems developed for the protection of electronic records.

11.3.2 Inventories

11.3.2.1 Inventories must be maintained for all raw materials (e.g. incoming honey) and finished products.

11.3.2.2 Non-complying products and the reasons for non-compliance must be clearly identified in the inventory.

11.3.2.3There must be a system in place for the identification of raw materials and products, and documentation that will allow any finished product to be traced:

- back to the supplier and the apiaries that the bee product was sourced from; and
- to the next person or company that the product is transferred to for further processing, packing, or storage; distributed to; or sold to.

11.4 Records

All records must be kept by the operator including:

- GMP compliance records
- processing records
- inventories

12 Recall

Amendment 1

March 2006

12.1 Purpose and scope

To ensure a system is in place for the recall of products that are not fit for intended purpose from distribution or sale.

12.2 Mandatory requirements

12.2.1 RMP Spec 12 (1)

Where, due to the nature of the bee product, it is possible to recall it from trade, distribution or from consumers, the operator must document a recall procedure, including:

- the criteria for deciding when a recall will be initiated; and
- how retrieval and disposition of the relevant bee product will be managed.

12.2.2 RMP Spec 12(2)

The operator must document a system for notifying the following people as soon as possible when bee product is recalled from trade, distribution or from consumers because it is not or may not be suitable for processing or fit for its intended purpose:

- the Director-General; and
- the accredited risk management programme verifier or recognised risk management programme verifying agency.

12.3 Procedures

For recall procedures, refer to the recalls section of the RMP Manual available from the NZFSA website.

13 Operator Verification and Other Operational Requirements

Amendment 1

March 2006

13.1 Purpose and scope

To verify compliance to documented procedures and to confirm the effectiveness of the RMP by ensuring that operator verification, including internal audits, are undertaken at the required frequencies.

To ensure that other operational requirements are met by the operator.

13.2 Mandatory requirements

13.2.1 RMP Spec 14

The operator must document an operator verification system including:

a. the activities to be performed, and their frequency;

b. any actions to be taken when all or part of the risk management programme is not effective; and

c. any recording and reporting requirements.

13.2.2 RMP Spec 25

The operator must notify the Director-General in writing, without unnecessary delay, of any change to the name or position or designation of the person(s) responsible for the day-to-day management of the risk management programme.

13.2.3 RMP Spec 26

The operator must document procedures for notifying the Director-General of any emerging, new or exotic biological hazards or new chemical hazards that come to the operator's attention in relation to the risk management programme without unnecessary delay.

13.2.4 RMP Spec 27

The operator must document procedures for notifying the recognised risk management programme verifying agency in writing, without unnecessary delay, of the following issues relating to the operation of the risk management programme:

a. any significant concern about fitness for intended purpose of any bee product:

b. where the cumulative effect of minor amendments necessitates the registration of a significant amendment to the risk management programme as provided in section 25 of the Act:

c. where the risk management programme is considered to be no longer effective:

d. where the premises are not or no longer suitable for their use:

e. where anything within the physical boundaries of the risk management programme is used for additional purposes or by other operators and the risk management programme has not adequately considered relevant hazards or other risk factors.

13.2.5 RMP Spec 28 (1)

The following activities that result in changes to the risk management programme require registration as an amendment in accordance with section 25 of the Act except where they are done on a trial basis and the affected bee product is not traded:

a. making major alterations to the processing facilities or equipment:

b. relocating processing operations to a new physical address (except where this is already permitted for mobile premises and vessels):

c. processing animal material or animal product that is not covered by the risk management programme, except:

   i. where the product and process are similar, and

ii. a documented risk factor identification and hazard analysis has shown that all risk factors associated with that animal material or animal product are already adequately addressed by the risk management programme:

d. setting up a new process or process modification that is not covered by the risk management programme, except:

i. where the process or process modification is similar to existing processes, and

ii. a documented risk factor identification and hazard analysis has shown that all risk factors associated with that process are already adequately addressed by the risk management programme:

e. making any other changes that introduce new risk factors, or adversely impact on existing risk factors:

f. merging two or more registered risk management programmes:

g. splitting a registered risk management programme into two or more risk management programmes:

h. adding a business to a multi-business risk management programme except where the Director-General's approval under section 17A of the Act applies to a type of business, premises or place rather than to specific businesses.

13.2.6 RMP Spec 28 (2)

The operator must, when making an amendment, consider whether consequential amendments to other components of the risk management programme are necessary.

13.3 Procedures

13.3.1 **Scope and frequency of internal audit**

13.3.1.1 Internal audits must be undertaken by the person responsible at an appropriate frequency to ensure compliance with the documented RMP, including GMP and process control procedures, and to identify and correct any problems.

It is recommended that an internal audit is done at least once every three months. This means that extractors who operate only during the honey flow season (3-4 months of the year) will only need to do an internal audit once a year.

13.3.1.2 A review of the RMP must be undertaken at least annually and when:

- significant changes in the product, process or premises are made; or
- the RMP is not working effectively.

13.3.2 Audit procedures

13.3.2.1 Observations made during the internal audit and corrective actions taken must be recorded.

Internal audits should consist of a review of records, reality checks, and confirmation that deficiencies or non-compliances identified from the last audit have been rectified. Records should be reviewed for:

- completeness and accuracy of required information;
- documentation of corrective actions;
- any trends, new hazards, recurring problems; and
- compliance with documented control procedures.

Reality checks should include observation of:

- workers' performance and compliance with documented hygienic procedures and operating procedures,
- compliance with process parameters such as processing times and temperatures, and
- hygienic status of the premises internal and external environment, facilities and equipment.

All deficiencies found at previous audits should be followed up.

13.3.2.2 When ongoing or recurring non-compliances occur, the following actions must be taken:

a. investigate to determine possible causes of non-compliance;

b. take appropriate corrective actions to regain control and prevent recurrence of the problem;

c. increase surveillance of the system; and

d. review the RMP or the relevant GMP programme and make necessary changes.

Significant amendments to the RMP must be evaluated and registered.

13.3.3 Product testing

It is recommended that any microbiological testing should be done by an IANZ (International Accreditation New Zealand) or LAS (Laboratory Accreditation Scheme) accredited laboratory.

13.3.3.1 Moisture content measurements must be performed by a suitably skilled person using documented methodologies (including calibration procedures) and/or calibrated equipment.

13.3.3.2 All results of product tests must be recorded.

13.3.4 Notification procedures

13.3.4.1 The day-to-day manager of the RMP must contact the NZFSA (Attention Programme Manager, Production and Processing, Approvals and ACVM Standards) without delay when it is necessary to notify the Director-General for reasons specified in RMP Spec 25 and 26 (refer to sections 13.2.2 and 13.2.3 of this document).

13.3.4.2 The day-to-day manager of the RMP must notify the recognised risk management programme verifying agency in writing (e.g. by email or letter) as required by and for reasons specified in RMP Spec 27 (refer to section 13.2.4 of this document).

13.4 Records

Records giving the following information must be kept by the operator:

- internal audit reports
- other information or evidence relating to operator verification activities (e.g. test results).
- copies of any communication sent to the NZFSA or the recognised RMP verifying agency.
- any corrective action taken (including restoration of control, product disposition and prevention of recurrence).

14 Glossary of Terms

Amendment 1

March 2006

Act means the Animal Products Act 1999.

Amenities includes toilets, wash rooms, locker rooms, change rooms, lunch/smoke rooms, and cafeterias.

Bulk honey is the common term used in New Zealand for honey obtained by extraction, settling or straining, and with or without minimal heating. Bulk honey is usually packed in drums.

Comb honey is honey presented in its original comb or portions thereof.

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

Creamed honey is extracted honey that has been processed by controlled crystallization.

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 the provision of process gases, lighting, ventilation, and water and waste management.

Extraction is the removal of honey from the comb by centrifugal force, gravity, straining or other means.

Facilities includes amenities, storage areas, and processing areas.

Honey means the natural sweet substance produced by honey bees from the nectar of blossoms or from secretions of living parts of plants or excretions of plant sucking insects on the living parts of plants, which honey bees collect, transform and combine with specific substances of their own, store and leave in the honey comb to ripen and mature.

Honey super means a unit of a beehive which contains frames of surplus honey to be harvested by the apiarist or beekeeper, and box, honey box or super has the same meaning.

Label includes any wording, tag, brand, symbol, picture, or other descriptive matter written, printed, stenciled, marked, embossed, impressed on, appearing on, attached to, or enclosed within any animal material or animal product.

Liquid honey is extracted honey that has been processed to make it completely liquid and free from visible crystals.

NZFSA means the New Zealand Food Safety Authority which is a semi-autonomous agency under the Ministry of Agriculture and Forestry.

Operator means an operator of a premises or place who operates an animal product business that is subject to a risk management programme.

Operator verification means the application of methods, procedures, tests and other checks by the operator to confirm the ongoing —

a. compliance of the risk management programme to the legislative requirements; and

b. compliance of the operation to the risk management programme as written; and

c. applicability of the risk management programme to the operation; and forms part of confirmation as described in section 17(3)(f) of the Act.

Packaging —

a. means any material that is intended to protect and that comes into immediate contact with the animal material or animal product; and

b. includes rigid materials such as cartons and containers where animal material or animal product is filled directly into the carton or container; and

c. includes any other material contained with, in, or attached to, the animal material or animal product (such as labels, satay sticks, and heat sensors).

Potable water means water that —

a. in relation to water supplied by an independent supplier (including a public or private supplier), is of a standard administered by the independent supplier under the Health Act 1956 and any regulations made under that Act; or

b. in relation to water supplied by the operator solely for the use of the operator (such as bore water, rainwater, surface water, or ground water),—

i. is of a standard equivalent to that referred to in paragraph (a), as determined by the operator based on an analysis of hazards and other risk factors; or

ii. complies with the requirements in Schedule 1; or

c. meets the requirements of the current “Meat Division Circulars 86/3/2 Surveillance of Potable Water in Meat and Game Export Premises" and “86/3/5 Amendment to MDC 86/3/2 86/14/5 on Surveillance of Potable Water in Meat and Game Export Premises” issued by the Ministry.

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.

Reticulation management plan means a documented programme that contains procedures for the management of the water reticulation system, (including pipework and fittings e.g. backflow prevention devices etc.), within the premises or place to ensure that the water quality is not adversely affected prior to the point of use.

Sanitary design —

a. in relation to any premises or place, facility, internal structure, equipment, or conveyance, means designed, constructed, and located so that it —

i. meets the requirements appropriate to the type of animal material or animal product and process, and which includes consideration of the movement of people, access, and process flow; and

ii. can be readily maintained, cleaned, sanitised, and sterilised where required, to ensure that risk factors from contaminants and pests are minimised; and

b. in relation to any equipment or accessway in any processing area, means that the equipment or accessway is designed, constructed and located so that it —

i. is easily accessible for maintenance, cleaning, operation, checking, and inspection; and

ii. minimises the contact of contaminants with any animal material (other than live mammals or live birds), or animal product or other equipment; and

iii. precludes the harbouring or accumulation of any contaminants or pests.

Sanitise means the application of an approved maintenance compound or physical agent with the intention of reducing microbial contamination to a level that will avoid the creation of a hazard.

Suitably skilled person means a person who in the opinion of the operator is skilled in a particular activity or task through training, experience, or qualifications.

Transport includes transport by road, rail, sea or air.

Transportation outer means a package that —

a. encases any packaged or unpackaged animal material or animal product for the purpose of transportation and distribution; and

b. is either removed before the animal product is used or offered for retail sale, or is not taken away by the consumer of the product;

but does not include a transportation unit.

Transportation unit includes vehicles, aircraft, railway wagons, ships, shipping containers, bulk tanks, trailers and any other form of transport used in the transport of animal material or product.

Water management plan means a documented programme that specifies the water quality standard and criteria, and procedures for the management of the water quality within the premises or place to ensure that the appropriate quality of water is delivered at the point of use.

Appendix 2:

Schedule 1: Specifications for Operator Supply of Potable Water

Schedule 1: Specification for operator supply of potable water

Water Supply Assessment Checklist

Complete one checklist for each water source being assessed.

A: SUPPLIER DETAILS

RMP No.	
Person who completed checklist	

B: WATER SOURCE

Tick the box representing your water source and then go to the appropriate part of the checklist as indicated.

☐ **Deep bore water** (i.e. bore greater than 10m deep) **– Go to B1**

☐ **Surface water** (e.g. bore less than 10m deep, spring, well, river, stream, dam, lake, reservoir) **– Go to B2**

☐ **Roof Water – Go to B3**

B1: DEEP BORE WATER (i.e. bore > 10m deep)

Tick the appropriate boxes in the table below and then move on to the relevant parts of the checklist as appropriate to the responses given.

Yes	No	Question
		Is the bore less than 10m deep?
		Is the soil/rock types such that contaminants could flow into the groundwater?
		Is surface water able to drain into the bore, due to the bore-head being inadequately sealed?
		Is the bore-head in an area prone to ponding and flooding?
		Do farmed animals have access to the bore-head?
		Is there any septic tank/long drop toilet outlet within 100 metres from the bore-head?
Do any of the following water characteristics change after rain? (you will need records of this to confirm these statements)		
		• Colour
		• Temperature
		• Turbidity
		• pH
		• *E. coli* or faecal coliform count

If all responses are NO, the water is secure, go to C, Water Storage

If any responses are YES, the water is not secure. Record details of problem(s) in row B1 of Table D. If the problems can be eliminated from the water supply permanently, eliminate the problem and then go to C, Water storage. If problems cannot be eliminated permanently, go to B2 and complete the questions for surface water.

If all responses are YES, the water is not secure - go to B2 and complete the questions for surface water.

B2: SURFACE WATER

e.g. Shallow bore (less than 10m), deep bore - not secure, spring, dam, lake, reservoir, stream

Tick the appropriate boxes in the table below and then move on to the relevant parts of the checklist as appropriate to the responses given.

Describe the water source (including name where appropriate)		
☐ Shallow bore……. ☐ Dam…….. ☐ Deep bore - not secure…..……. ☐ Lake……. ☐ Spring…….…… ☐ Reservoir……. ☐ Stream…….…… ☐ River……. ☐ Other (specify)….....		
Yes	No	Question
		Are any of the following within 50 metres of the water source?
		Offal pit / soak hole
		Animal effluent to pasture
		Sumps, stock yards or feed pads not connected to an approved effluent system
		Fuel tanks
		Timber treatment facility
		Abandoned or decommissioned wells
		Septic tank / long-drop toilet
		Land disposal site/refuse pit
		Silage stack
		Chemical preparation/storage
		Pesticide residues
Do you have any of the following water problems? You will need records of this to confirm these statements		
		Bacterial contamination
		Turbidity
		Sediment
		Colour
		Smell
		Taste
Do any of the following factors present risks to the water?		
		Spray drift
		Nearby factories
		Mining operations
		Material from effluent ponds or surface impoundments (waste ponds or lagoons) - either treated discharge or leakage
		Contaminants washed into source during irrigation
		Geothermal contaminants (e.g. arsenic, boron, lithium etc)
		Saline water
		Possible flooding (consider council land information/LIM reports)
		Other factors (Specify here);

If all responses are NO, continue with B2

If any responses are YES, record details of problem(s) in row B2 of Table D then continue with B2

B2: SURFACE WATER (Continued)

Tick the appropriate boxes in the tables below and then move on to the relevant parts of the checklist as appropriate to the responses given.

Describe the surface water type	
☐	**Flowing water** (e.g. unsecure bores, rivers, streams, springs) **– Go to B2(i)**
☐	**Confined water** (e.g. dams, lakes, reservoirs) **– Go to B2(ii)**

B2(i): FLOWING SURFACE WATER

Yes	No	Question
		Is effluent discharged less than 2 km upstream of the water intake and if yes, is effluent discharged less than 4 hours before water is taken from that source? If Yes to both statements, state water source ……..
		Do farmed animals have access to within 10m of the water intake?
		Is industrial or urban stormwater discharged to the source water upstream of the intake?

If all responses are NO, go to C, Water Storage

If any response is YES, record details of problem(s) in row B2(i) of Table D and then go to C, Water Storage

B2(ii): CONFINED SURFACE WATER

Yes	No	Question
		Is the water accessible to farmed animals?
		Is effluent discharged into the dam/lake/reservoir?
		Is industrial or urban stormwater discharged into the dam/lake/reservoir?

If all responses are NO, go to C, Water Storage

If any response is YES, record details of problem(s) in row B2(ii) of Table D then go to C, Water Storage

B3: ROOF WATER

Tick the appropriate boxes in the table below and then move on to the relevant parts of the checklist as appropriate to the responses given.

Yes	No	Question
		Roofing Materials: Are any of the following materials used on the water collection surfaces?
		Galvanised iron?
		Lead materials (lead nails, flashings, paint)?
		Asbestos materials?
		Paint or other surface treatment in poor condition?
		Roof environment
		Is the roof overhung by trees?
		Are there any other factors that could encourage birds or other pests to move about or settle on the roof?
		Atmospheric fall out
		Are there industrial (including agricultural chemicals) or natural sources of atmospheric fall out?
		Is there any ash/soot deposit on the roof?
		Roof maintenance
		Are the gutterings left for more than a month before cleaning them out?

If all responses are NO, go to C, Water Storage

If any response is YES, record details of problem in row B3 of Table D and then go to C, Water Storage

C: WATER STORAGE

Describe Water Storage Facilities
☐ **Do not have holding tanks – Go to Table D if problems have been identified in the previous parts, or E if no problems have been identified in the previous parts.**
☐ **Have holding tanks – Go to C1**

C1: HOLDING TANKS

If there is more than one storage facility, copy and fill out this section for each storage facility.

Yes	No	Question
		Is the outlet of the holding tank below or level with the base of the tank, allowing any debris that has settled to be sucked out with the water?
		Is the water in holding tanks prone to stagnation that results in deterioration of water quality?
		Are holding tanks inspected and maintained less than once per year?
		Are holding tanks dirty and not cleaned when necessary?
		Are holding tanks uncovered allowing access by animals, or other debris or other contaminants into the tanks?

If all responses are No, the water STORAGE is satisfactory. Go to table D and check that any other problems identified in the checklist are followed up.

If any response is Yes, the water STORAGE is not satisfactory. Record details of problem in row C1 of Table D then fill out rest of Table D.

Table D: CORRECTIVE ACTION

Wherever there was a "Yes" answer in the part of the checklist referred to, write the details of the problem identified into the correct row of this table. Fill out the rest of the table to show whether or not the problem is a source of contamination; and where possible what you have done to eliminate the problem and permanently prevent the contamination from occurring (e.g. preventing animal access, no longer using chemicals in the vicinity of the collection area, resurfacing roof etc).

				Problem	
Ref	**Problems identified**	**Biological hazard, chemical hazard or turbidity issue caused by the problem(s)**	**Action taken to address problem(s)**	**Eliminated (✓)**	**Still Remains (✓)**
B1 Deep bore water					
B2 Surface water					
B2(i) Flowing surface water					
B2(ii) Confined surface water					
B3 Roof Water					
C1 Holding Tanks					
E Initial water testing					

If problems have been permanently eliminated, a water management plan is not needed. Go to E

If some problems still exist, record the problem in the first row of D1 and then fill out the rest of D1 with how this problem will be managed on an ongoing basis.

D1: WATER MANAGEMENT PLAN

A water management plan is required where there are any problems that are not managed with your water supply.

This water management plan covers the routine, ongoing water treatment undertaken or actions to ensure that the water is potable, or it may include routine testing conducted to demonstrate that the problem (that cannot be permanently eliminated) is being controlled on an ongoing basis such that treatment is not needed.

A separate D1 should be completed for each problem that needs to be managed from Table D.

Document and implement a water management plan.

Remaining problem from Table D:

Method to manage the identified problem

- ☐ Filtration
- ☐ Chlorination
- ☐ Ultraviolet light
- ☐ Ozone
- ☐ Routine ongoing testing to demonstrate control
- ☐ Other (Specify)……..

The treatment is done in accordance with the procedures:

- ☐ provided by the manufacturer / supplier of the water treatment system *(attach)*; or
- ☐ given below:
  (enter details where relevant, e.g.- equipment type, equipment maintenance (frequency, activity and method, e.g. for replacement or cleaning filters or replacement of UV lights),- other control measures, (e.g. addition of chorine or ozone, frequency, method, any limits (e .g. concentration of chlorine, monitoring frequency)), what is checked (e.g. chlorine level, turbidity) and method, corrective action to be taken when limits exceeded or not met):

OR

- ☐ Details of the routine testing to demonstrate that the problem is being controlled on an ongoing basis (test, frequency).

Other ongoing control measures (either frequency, activity and method, e.g. for routine cleaning of roof or tanks):

↓

Once this table is completed, go to E

E: INITIAL WATER TESTING

Yes	No	Question
		Has a microbiological test for *E.coli* or faecal coliforms been done on this source within the last month?
		If a particular chemical hazard was identified as likely to occur during completion of this checklist, has a relevant chemical test been done on this source within the last month?

If any response is NO, get the relevant tests done, then

If all responses are YES

Name the laboratory which did each test

Yes	No	Question
		Does the water satisfy the microbiological criteria in Table 1: Quality of Potable Water?
		For any additional chemical tests done, does the water satisfy the requirements of the current DWSNZ?

If any response is No, Go to Table D and review / improve the corrective actions taken. Repeat the testing and corrective action process until the water is satisfactory

If all responses are yes

The water is satisfactory. No further action is needed until reassessment of the water supply is required (see clause 4, reassessment of the water supply) or further water testing is required in accordance with the requirements of Table 2, Frequency of Ongoing Testing.