

EXPLANATORY STATEMENT

PROPOSAL P289

**FOOD SAFETY PROGRAMS FOR THE PRODUCERS
OF MANUFACTURED & FERMENTED MEATS**

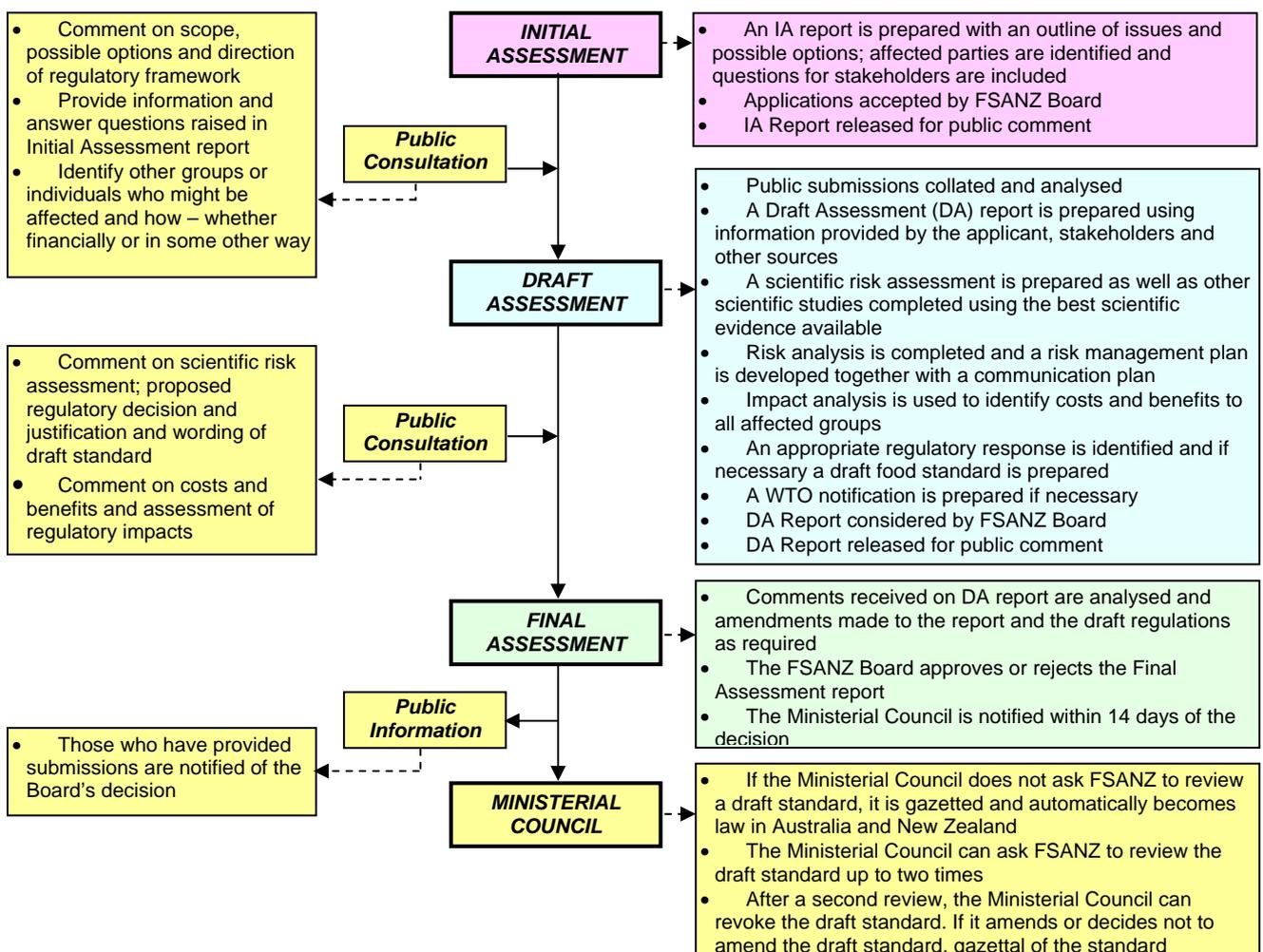
FOOD STANDARDS AUSTRALIA NEW ZEALAND (FSANZ)

FSANZ's role is to protect the health and safety of people in Australia and New Zealand through the maintenance of a safe food supply. FSANZ is a partnership between ten Governments: the Australian Government; Australian States and Territories; and New Zealand. It is a statutory authority under Commonwealth law and is an independent, expert body.

FSANZ is responsible for developing, varying and reviewing standards and for developing codes of conduct with industry for food available in Australia and New Zealand covering labelling, composition and contaminants. In Australia, FSANZ also develops food standards for food safety, maximum residue limits, primary production and processing and a range of other functions including the coordination of national food surveillance and recall systems, conducting research and assessing policies about imported food.

The FSANZ Board approves new standards or variations to food standards in accordance with policy guidelines set by the Australia and New Zealand Food Regulation Ministerial Council (Ministerial Council) made up of Australian Government, State and Territory and New Zealand Health Ministers as lead Ministers, with representation from other portfolios. Approved standards are then notified to the Ministerial Council. The Ministerial Council may then request that FSANZ review a proposed or existing standard. If the Ministerial Council does not request that FSANZ review the draft standard, or amends a draft standard, the standard is adopted by reference under the food laws of the Australian Government, States, Territories and New Zealand. The Ministerial Council can, independently of a notification from FSANZ, request that FSANZ review a standard.

The process for amending the *Australia New Zealand Food Standards Code* is prescribed in the *Food Standards Australia New Zealand Act 1991* (FSANZ Act). The diagram below represents the different stages in the process including when periods of public consultation occur. This process varies for matters that are urgent or minor in significance or complexity.



Final Assessment Stage

FSANZ has now completed two stages of the assessment process and held two rounds of public consultation as part of its assessment of this Proposal. This Final Assessment Report and its recommendations have been approved by the FSANZ Board and notified to the Ministerial Council.

If the Ministerial Council does not request FSANZ to review the draft amendments to the Code, an amendment to the Code is published in the *Commonwealth Gazette* and the *New Zealand Gazette* and adopted by reference and without amendment under Australian State and Territory food law.

In New Zealand, the New Zealand Minister of Health gazettes the food standard under the New Zealand Food Act. Following gazettal, the standard takes effect 28 days later.

Further Information

Further information on this Proposal and the assessment process should be addressed to the FSANZ Standards Management Officer at one of the following addresses:

Food Standards Australia New Zealand
PO Box 7186
Canberra BC ACT 2610
AUSTRALIA
Tel (02) 6271 2222
www.foodstandards.gov.au

Food Standards Australia New Zealand
PO Box 10559
The Terrace WELLINGTON 6036
NEW ZEALAND
Tel (04) 473 9942
www.foodstandards.govt.nz

Assessment reports are available for viewing and downloading from the FSANZ website www.foodstandards.gov.au or alternatively paper copies of reports can be requested from FSANZ's Information Officer at info@foodstandards.gov.au including other general inquiries and requests for information.

CONTENTS

EXECUTIVE SUMMARY	5
DECISION	5
STATEMENT OF REASONS.....	6
1. INTRODUCTION.....	7
2. REGULATORY PROBLEM.....	7
3. OBJECTIVE	7
4. BACKGROUND	8
4.1 DEVELOPMENT OF P289.....	8
5. RELEVANT ISSUES	11
5.1 DEFINITION OF MANUFACTURED AND FERMENTED MEAT	11
5.2 AUDITING	12
6. REGULATORY OPTIONS.....	12
7. IMPACT ANALYSIS	13
7.1 COST/BENEFIT ANALYSIS	13
7.2 AFFECTED PARTIES.....	13
8. CONSULTATION	14
8.1 PUBLIC CONSULTATION.....	14
8.2 WORLD TRADE ORGANIZATION (WTO)	14
10. CONCLUSION AND RECOMMENDATION	14
11. IMPLEMENTATION AND REVIEW	15
ATTACHMENT 1 - DRAFT VARIATIONS TO THE AUSTRALIA NEW ZEALAND FOOD STANDARDS CODE.....	16
ATTACHMENT 2 - ISSUES RAISED DURING THE PUBLIC CONSULTATION ON THE DRAFT ASSESSMENT REPORT	23
ATTACHMENT 3 - BIBLIOGRAPHY	31

Executive Summary

This Final Assessment Report is the last stage in the development of P289 – Food Safety Programs for the Producers of Manufactured and Fermented Meats. FSANZ prepared Proposal 289 in response to a decision of the Australia and New Zealand Food Regulation Ministerial Council (Ministerial Council) to mandate food safety management systems for producers of manufactured and fermented meats (i.e. ready-to-eat meats).¹ Over the course of this proposal, FSANZ undertook two rounds of public consultation and held detailed discussions with an external Advisory Group consisting of consumer, industry and government representatives.

As well as outlining the proposed standard (see Attachment 1), this Final Assessment Report summarises the submissions received from the second round of public consultation, of which there were 13, and outlines the response to those submissions (see Attachment 2).

Decision

The outcome of P289 is Standard 4.2.3 Primary Production and Processing Standard for Meat (Division 3 – Production of ready-to-eat meat) and Standard 4.2.2 – Primary Production and Processing Standard for Poultry Meat (Division 3 – Production of ready-to-eat poultry meat). These are new national standards for the ready-to-eat meat sector and require producers of ready-to-eat meats to systematically identify, evaluate and control food safety hazards using a documented food safety management system. This outcome is consistent with the intent of the Ministerial Council decision, but does not belie the current regulatory environment and industry practices.

Producers of ready-to-eat meat are defined in this standard as those businesses involved in the making, manufacturing, producing, extracting, processing, preparing, treating, preserving, packing, cooking, thawing or handling² of these products. This includes businesses that handle ready to eat meat for retail sale.

Ready-to- meats are defined as those meats that are intended to be consumed without further heating or cooking and include:

- cooked or uncooked fermented meat; and
- pâté; and
- dried meat; and
- slow cured meat; and
- luncheon meat; and
- cooked muscle meat including ham and roast beef; and
- other ready-to-eat meat that is susceptible to the growth of pathogens or the production of toxins.

¹ The Ministerial Policy Guidelines on *Food Safety Management in Australia: Food Safety Programs* can be viewed at www.foodsecretariat.health.gov.au/pdf/food_safety.pdf

² Handling is defined as slicing, shaving or dicing, where it is followed by the packaging of the product in a modified atmosphere package.

The above definitions were developed after consultation with the external Advisory Group using data from the National Risk Validation Project, Meat and Livestock Australia *Through Chain Risk Profile for the Australian Red Meat Industry* and submissions provided during the public consultation periods on the Initial and Draft Assessment Reports.

Statement of Reasons

FSANZ recommends that the Code be varied as described above for the following reasons:

- The Ministerial Policy Guidelines *Food Safety Management in Australia: Food Safety Programs* set out a requirement for FSANZ to develop a standard mandating food safety programs for producing manufactured and fermented meat. The decision of Ministers was based on:
 - the National Risk Validation Project concluded that the production of manufactured and fermented meats (i.e. ready-to-eat meat) was a potentially high-risk sector;
 - the Allen Report on the costs and efficacy of introducing food safety programs concluded that the benefits for high-risk businesses outweighed the costs of implementing, utilising and auditing a food safety management system;
- The majority of producers of ready-to-eat meats are already operating under a documented food safety management system and will not be significantly affected by the proposed variation to the Code;
- The proposed variations to the Code that mandate a documented food safety management system for producers of ready-to-eat meats is consistent with the objectives of the FSANZ Act, including section 10; and
- The proposed variations to the Code provide a preventative approach to food safety management that allows enforcement agencies to establish compliance with the system through audit processes.

1. Introduction

This Final Assessment Report represents the last stage in the development of P289- Food Safety Programs for the Producers of Manufactured and Fermented Meats. This Report summarises the submissions from the second round of public consultation and details the response to those submissions. In addition, this Report includes the proposed amendments to the Code.

2. Regulatory Problem

On 12 December 2003, the Ministerial Council approved the Ministerial Policy Guidelines on *Food Safety Management in Australia: Food Safety Programs*³ for national application. These guidelines included a recommendation for the development and implementation of mandatory food safety programs for producing manufactured and fermented meat. The intent of the guidelines was to apply to ready-to-eat meat products. In response to the recommendation of the Ministerial Council, FSANZ prepared a Proposal pursuant to section 12AA of the *Food Standards Australia New Zealand Act 1991* (FSANZ Act) for amending Standard 3.2.1 Food Safety Programs to apply to producers of ready-to-eat meats.

Food safety within the ready-to-eat meat sector is currently regulated through a combination of State and Territory legislation and voluntary industry guidelines and codes of practice. State and Territory legislation mandates compliance with the *Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption [AS 4696-2002 (the Australian Standard)]*.⁴ This includes a requirement for producers of ready-to-eat meats to have a documented HACCP-based food safety management system in place.

These food safety management systems currently in place in the ready-to-eat meat sector are generally considered to exceed the requirements of 3.2.1. As a result, the outcome of P289- Food Safety Programs for the Producers of Manufactured and Fermented Meats, as outlined in this Report, is consistent with the intent of the Ministerial Policy Guidelines but does not belie the current regulatory environment and industry practices.

3. Objective

The specific objective of P289 – Food Safety Programs for the Producers of Manufactured and Fermented Meats, is to reduce the incidence of food-borne illness in Australia due to the consumption of ready-to-eat meats, via a nationally consistent approach that requires producers of ready-to-eat meats to have a documented food safety management system.

In addition, in developing or varying a food standard, FSANZ is required to meet three primary objectives, which are set out in section 10 of the FSANZ Act. These are:

- the protection of public health and safety;
- the provision of adequate information relating to food to enable consumers to make informed choices; and

³ The Ministerial Policy Guidelines on *Food Safety Management in Australia: Food Safety Programs* can be viewed at www.foodsecretariat.health.gov.au/pdf/food_safety.pdf

⁴ Available at the Standards Australia website: <http://www.standards.com.au/catalogue/script/search.asp>

- the prevention of misleading or deceptive conduct.

In developing and varying standards, FSANZ must also have regard to:

- the need for standards to be based on risk analysis using the best available scientific evidence;
- the promotion of consistency between domestic and international food standards;
- the desirability of an efficient and internationally competitive food industry;
- the promotion of fair trading in food; and
- any written policy guidelines formulated by the Ministerial Council.

4. Background

4.1 Development of P289

Table 1 outlines the development of P289 in regard to the consideration by the FSANZ Board, the development and subsequent public release of, assessment reports, the issues raised during public consultation and the formation and discussions of an external Advisory Group.

The development process relied on the advice received from the external Advisory Group. The Advisory Group consisted of consumer, industry and government representatives and provided FSANZ with an insight into the current operations of the meat processing industry. This group also assisted FSANZ in resolving the scope, definition and proposed requirements for businesses covered under the proposed standard.

Table 1: Outline of the development of P289 – Food Safety Programs for Producers of Manufactured and Fermented Meats.

	CONSIDERATION BY FSANZ BOARD	ASSESSMENT REPORTS	P289 ADVISORY GROUP	PUBLIC CONSULTATION
INITIAL ASSESSMENT	<p>The FSANZ Board in May 2004:</p> <ul style="list-style-type: none"> • Made an Initial Assessment for amending Standard 3.2.1 Food Safety Programs to apply to producers of manufactured and fermented meats; • Approved the Initial Assessment Report (IAR) for public release; • Noted that a committee would be established to assist FSANZ in developing this Proposal; and • Agreed to seek public submissions. 	<ul style="list-style-type: none"> • The Initial Assessment Report (IAR): <ul style="list-style-type: none"> ○ outlined the regulatory framework; ○ outlined the rationale for mandating food safety programs; and ○ gave an overview of the manufactured and fermented meat industry. • The IAR sought public comment on: <ul style="list-style-type: none"> ○ the definition of manufactured and fermented meat; ○ issues surrounding implementation of any proposed standard; and ○ the proposed regulatory option. 	<ul style="list-style-type: none"> • An Advisory Group was established to provide advice to FSANZ during the development of P289. • The first Advisory Group meeting was held in June 2004 and involved discussion of: <ul style="list-style-type: none"> ○ the IAR; ○ communication needs; ○ the definition of manufactured and fermented meats; ○ strategies to address food safety management; and ○ issues surrounding the importation of manufactured and fermented meat. • The second Advisory Group meeting was held in December 2004 and involved discussion of: <ul style="list-style-type: none"> ○ the issues raised during public consultation on the IAR; ○ the work of a subcommittee regarding the definition of manufactured and fermented meats; ○ the comparison between the Australian Standard (AS4696-2002) and the Food Standards Code; ○ the scope and proposed requirements of standard 3.2.1; and ○ issues surrounding the implementation of the Standard. 	<ul style="list-style-type: none"> • The IAR was released for public consultation for an 8-week period. • The main issues raised in this round of public consultation were regarding: <ul style="list-style-type: none"> ○ the definition of manufactured and fermented meats; ○ the development of tools to aid the implementation of the standard (i.e. an interpretive guide); ○ the current control of food safety risks in the manufactured and fermented meat industry; ○ the potential changes to current regulatory practices; ○ the scientific justification for mandating standard 3.2.1; ○ auditing; ○ regulatory options for ensuring compliance; and ○ the potential impact of any standard on stakeholders. • The response to the issues raised in this round of public consultation was discussed in the DAR.

	CONSIDERATION BY FSANZ BOARD	ASSESSMENT REPORTS	P289 ADVISORY GROUP	PUBLIC CONSULTATION
DRAFT ASSESSMENT	<p>The FSANZ Board in May 2005:</p> <ul style="list-style-type: none"> • Made a Draft Assessment; • Agreed to the proposed draft variation/s to Standard 4.2.2 and Standard 4.2.3 of the <i>Australia New Zealand Food Standards Code</i> (Attachment 1 to the DAR); • Approved the DAR for public release; and • Agreed to seek public submissions in relation to the draft variations to the <i>Australia New Zealand Food Standards Code</i>. 	<ul style="list-style-type: none"> • The Draft Assessment Report (DAR): <ul style="list-style-type: none"> ○ discussed comments received during the IAR public consultation; ○ detailed the activities and products to be covered under the proposed draft standard; and ○ outlined the proposed draft standard. • The DAR sought comment on the proposed standard. 	<ul style="list-style-type: none"> • The third Advisory Group meeting was held in July 2005 and involved discussion of: <ul style="list-style-type: none"> ○ the issues raised during public consultation on the DAR; ○ the preparation of the Final Assessment Report; and ○ issues surrounding the implementation of the standard (i.e. the interpretive guide). 	<ul style="list-style-type: none"> • The DAR was released for public consultation for an 8-week period. • The main issues raised in this round of public consultation were regarding: <ul style="list-style-type: none"> ○ the definition of manufactured and fermented meats; ○ the proposed drafting of the standard; ○ the development of tools to aid the implementation of the standard (i.e. an interpretive guide); ○ the recognition of equivalence; ○ the scientific justification for mandating standard 3.2.1; ○ auditing; and ○ the potential impact of any standard on stakeholders. • The response to the issues raised in this round of public consultation is discussed in Attachment 2.

5. Relevant Issues

5.1 Definition of Manufactured and Fermented Meat

The majority of the discussions on this proposal have been surrounding the definition of ‘producers of manufactured and fermented meats’.⁵ These definitions are essential for identifying the products or categories of products, and the types of businesses that are required to implement food safety programs.

Through these discussions, it was acknowledged that defining manufactured and fermented meats is complex as these meats are produced from a number of meat animal species and produced using a range of different processes. It was also acknowledged that although the Standard was being developed to control products of high risk to consumers, there was also a need to ensure lower risk products that are produced using a process designed to control food-borne hazards (i.e. a process that contains a critical control point) be included in the definition.⁶ Such lower risk products include whole muscle meats (i.e. whole hams etc) and luncheon meats (i.e. devon, pressed chicken etc).

The final definitions (listed in the following paragraphs) were developed based on consultation with the Advisory Group using data from the National Risk Validation Project, *MLA Through Chain Risk Profile for the Australian Red Meat Industry* and submissions provided during the public consultation periods on the Initial Assessment Report and Draft Assessment Reports. From these discussions it was decided to modify the wording from ‘manufactured and fermented meat’ to ‘ready-to-eat meat’. This change is consistent with the intent of the Ministerial Guidelines and will aid implementation by clarifying which producers are covered under the standard and producers who are not covered.

The proposed final definition for **producer of ready-to-eat meat** is:

a food business that engages in the –

- (a) *making, manufacturing, producing, extracting, processing, preparing, treating, preserving, packing, cooking, thawing or handling⁷ of ready to eat meat; or*
- (b) *handling of ready to eat meat for retail sale.*

The proposed final definition for **ready-to-eat meat** is:

meat products intended to be consumed without further heating or cooking, and includes –

- (a) *cooked or uncooked fermented meat; and*

⁵ Ten of the twelve submissions received on the IAR and six of the thirteen submissions received on the DAR commented on the definition of manufactured and fermented meats. In addition, a working group of the Advisory Group was established to develop the definition of manufactured and fermented meats.

⁶ There have been considerable technical advances in the industry and the introduction of quality systems and HACCP through the industry have reduced the number of food-borne disease outbreaks described in the period surveyed in the National Risk Validation Project and leading to the decision of the Ministerial Council.

⁷ Handling means slicing, shaving or dicing, where it is followed by the packaging of the product in a modified atmosphere package.

- (b) *pâté; and*
- (c) *dried meat; and*
- (d) *slow cured meat; and*
- (e) *luncheon meat; and*
- (f) *cooked muscle meat including ham and roast beef; and*
- (g) *other ready-to-eat meat that is susceptible to the growth of pathogens or the production of toxins.*

5.2 Auditing

One submission on the Draft Assessment Report (DAR) raised the issue of unnecessary duplication of audits. This implementation issue was raised in the first round of public consultation and, as discussed in the DAR, is being progressed through the Food Regulation Standing Committee Implementation Sub-Committee.

6. Regulatory Options

The preferred approach canvassed in the DAR was to adopt Standard 4.2.3 - Primary Production and Processing Standard for Meat (Division 3 – Production of manufactured and fermented meat) and Standard 4.2.2 – Primary Production and Processing Standard for Poultry Meat (Division 3 – Production of manufactured poultry meat) to apply a food safety management system to producers of manufactured and fermented meats. This option was supported by 11 of the 13 submissions received on the DAR (the other two submissions made no direct comment).

As discussed in Section 5.1 of this Report, the wording in the standard was changed from ‘manufactured and fermented meat’ to ‘ready-to-eat meat’. Therefore this FAR proposes the adoption of Standard – 4.2.3 Primary Production and Processing Standard for Meat (Division 3 – Production of ready-to-eat meat) and Standard 4.2.2 – Primary Production and Processing Standard for Poultry Meat (Division 3 – Production of ready-to-eat meat). Adoption of these standards means that a documented food safety management system will be a national requirement for producers of ready-to-eat meats. This is consistent with the intent of the Ministerial Policy Guidelines.

These Standards require a producer of ready-to-eat meats to implement a food safety management plan that identifies, evaluates and controls hazards and that:

EITHER

- documents all stages of production;
- identifies all food safety hazards and controls through the use of a HACCP plan;
- documents compliance with Standard 3.2.2 of the Code; and
- documents the management system set out in clauses 3.3 to 3.10 of the *Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption* (AS4696-2002);

OR

- complies with a food safety management system recognised by the relevant authority (e.g. Export Control (Meat and Meat Products) Orders 2005 or the Australian Standard (AS 4696:2002)).

The Standard will apply in Australia only. New Zealand has its own legislation in regard to the application of food safety programs as food safety standards are outside the scope of the *Agreement between the Government of Australia and the Government of New Zealand concerning a joint food standards system* (the Treaty).

7. Impact Analysis

7.1 Cost/benefit analysis

The cost/benefit analysis for introducing food safety programs into the manufactured and fermented meat sector was described in *Food Safety Management Systems – Costs, Benefits and Alternatives* (the Allen Report) and *The National Risk Validation Report* and has been previously discussed in the DAR.

One submission on the DAR suggested that as the National Risk Validation Project did not take producers of lower risk products (i.e. whole muscle meats, luncheon meats) into account when undertaking the cost/benefit analysis, the proposed draft Standards would affect a significantly larger number of businesses than previously identified. However, producers of these lower risk products are already operating under a documented food safety management system and therefore will not be significantly affected by the proposed variation to the Code.

7.2 Affected Parties

Parties affected by the proposed draft Standards are businesses involved in the making, manufacturing, producing, extracting, processing, preparing, treating, preserving, packing, cooking, thawing or handling⁸ of ready to eat meat (meat products intended to be consumed without further heating or cooking)⁹ and also includes businesses that slice, shave or dice ready-to-eat meat products, where the activity is followed by the packaging of the product in a modified atmosphere package.

There have been no additional affected parties identified since the DAR. The interpretive guide will provide examples of those businesses required to comply with the proposed draft Standards and examples of the products which must be produced according to the proposed draft Standards.

⁸ Slicing, shaving or dicing, where it is followed by the packaging of the product in a modified atmosphere package.

⁹ Ready-to- meats include:

- (a) cooked or uncooked fermented meat; and
- (b) pâté; and
- (c) dried meat; and
- (d) slow cured meat; and
- (e) luncheon meat; and
- (f) cooked muscle meat including ham and roast beef; and
- (g) other ready-to-eat meat that is susceptible to the growth of pathogens or the production of toxins.

8. Consultation

8.1 Public consultation

The Draft Assessment Report was released for an eight-week public comment period from 25 May until 20 July 2005. Thirteen submissions were received. The submissions were received from:

- State and Territory Governments

Department of Human Services, Victoria
Safe Food Queensland
Queensland Health
Tasmanian Working Group - Food Safety Programs for Manufactured & Fermented Meats (representing Department of Primary Industries, Water and Environment (Meat Hygiene Standards Section), Department of Health and Human Services (Environmental Health Services), Local Government (Clarence City Council).
Department of Health Western Australia

- Industry Groups

Environmental Health Association (Australia)
Food Technology Association of Victoria Inc
Australian Food and Grocery Council
Meat & Livestock Australia
Australian Meat Industry Council
George Weston Foods Limited

- Department of Agriculture, Fisheries and Forestry

- New Zealand Food Safety Authority

Where relevant, the submissions and responses have been discussed in the body of this FAR, with a summary of all the submissions and the response to these submissions is provided in Attachment 2.

8.2 World Trade Organization (WTO)

As the mandatory application of food safety management systems for ready-to-eat meats will have implications for imported product in this category, notification was made in accordance with Australia's obligations under Sanitary and Phytosanitary Measure (SPS) Agreements.

The WTO notification period ended on 1 August 2005. No comments were received.

10. Conclusion and Recommendation

The Standards resulting from this process will amend the Code to mandate food safety management systems for producers of ready-to-eat meats for the following reasons:

- the Ministerial Policy Guidelines *Food Safety Management in Australia: Food Safety Programs* set out a requirement for FSANZ to develop a standard mandating food safety programs for producing manufactured and fermented meat. The decision of Ministers was based on:
 1. The National Risk Validation Project concluded that the production of manufactured and fermented meats (i.e. ready-to-eat meat) was a potentially high-risk sector;
 2. The Allen Report on the costs and efficacy of introducing food safety programs concluded that the benefits for high-risk businesses outweighed the costs of implementing, utilising and auditing a food safety management system;
- the majority of producers of ready-to-eat meats are already operating under a documented food safety management system and will not be significantly affected by the proposed variation to the Code;
- the proposed variations to the Code that mandate a documented food safety management system for producers of ready-to-eat meats is consistent with the objectives of the FSANZ Act, including section 10; and
- the proposed variations to the Code provide a preventative approach to food safety management that allows enforcement agencies to establish compliance with the system through audit processes.

The proposed drafting for amendments to the Code is at Attachment 1.

11. Implementation and review

Implementation of Standard – 4.2.3 Primary Production and Processing Standard for Meat (Division 3 – Production of ready-to-eat meat) and Standard 4.2.2 – Primary Production and Processing Standard for Poultry Meat (Division 3 – Production of ready-to-eat meat) will be aided by the development of an interpretive guide to the standard. In addition to the interpretive guide, there are a number of other tools developed by industry and jurisdictions that can aid the implementation of the proposed draft Standards (e.g. HACCP plan templates etc). These will be referenced in the interpretive guide.

The Ministerial Policy Guidelines have specified that mandatory food safety programs for the producers of manufactured and fermented meats be nationally implemented in two years after the amendment to the Code is gazetted.

ATTACHMENTS

1. Draft Variations to the *Australia New Zealand Food Standards Code*
2. Summary of Submissions
3. Bibliography

Draft Variations to the *Australia New Zealand Food Standards Code*

To commence: 12 months from gazettal

Note on commencement:

Subclause 1(2) of Standard 1.1.1 applies to these amendments to the Code. The effect of this subclause is that a food is taken to comply with Division 3 of Standards 4.2.2 and 4.2.3 (below) for a period of 12 months after the commencement of the Standard, provided the food otherwise complied with the Code. This means that producers of ready-to-eat meat have 2 years from the gazettal of Standards 4.2.2 and 4.2.3 (Division 3) before they are required to comply with the new requirements.

[1] *Standard 1.6.2 of the Australia New Zealand Food Standards Code is varied by omitting clause 9.*

[2] *The Australia New Zealand Food Standards Code is varied by inserting -*

STANDARD 4.2.2

**PRIMARY PRODUCTION AND PROCESSING STANDARD FOR
POULTRY MEAT**

(Australia Only)

Purpose and commentary

Reserved

Table of Provisions

Division 1 – Reserved

- 1 Reserved
- 2 Reserved

Division 2 – Reserved

Division 3 – Production of ready-to-eat poultry meat

- 3 Requirements for producers of ready-to-eat poultry meat

Clauses

Division 1 – Reserved

- 1 Reserved

2 Reserved

Division 2 – Reserved

Division 3 – Production of ready-to-eat poultry meat

3 Requirements for producers of ready-to-eat poultry meat

Division 3 of Standard 4.2.3 (production of ready-to-eat meat) applies to the producers of ready-to-eat poultry meat.

[3] *The Australia New Zealand Food Standards Code is varied by inserting –*

STANDARD 4.2.3

PRODUCTION AND PROCESSING STANDARD FOR MEAT

(Australia Only)

Purpose and commentary

Reserved

Table of Provisions

Division 1 – Preliminary

- 1 Reserved
- 2 Interpretation

Division 2 – Reserved

Division 3 – Production of ready-to-eat meat

- 3 Interpretation
- 4 Requirements on producers of ready-to-eat meat
- 5 Additional requirements for uncooked comminuted fermented meat

Clauses

Division 1 – Preliminary

- 1 Reserved**
- 2 Interpretation**

(1) Unless the contrary intention appears, the definitions in Chapter 3 of this Code apply for the purposes of this Standard.

Division 2 – Reserved

Division 3 – Production of ready-to-eat meat

3 Interpretation

In this Division –

control means a measure that prevents, eliminates or reduces to an acceptable level, a food safety hazard.

HACCP plan means the –

- (a) Codex HACCP plan, Annex to CAC/RCPI 1969, Revision 4 (2003); or
- (b) HACCP plan outlined in Australian Standard AS-4696-2002.

handling means slicing, shaving or dicing, where it is followed by the packaging of the product in a modified atmosphere package.

producer of ready-to-eat meat means a food business that engages in the –

- (a) making, manufacturing, producing, extracting, processing, preparing, treating, preserving, packing, cooking, thawing or handling of ready-to-eat meat; or
- (b) handling of ready-to-eat meat for retail sale.

ready-to-eat meat means meat products intended to be consumed without further heating or cooking, and includes –

- (a) cooked or uncooked fermented meat; and
- (b) pâté; and
- (c) dried meat; and
- (d) slow cured meat; and
- (e) luncheon meat; and
- (f) cooked muscle meat including ham and roast beef; and
- (g) other ready-to-eat meat that is susceptible to the growth of pathogens or the production of toxins.

4 Requirements on producers of ready-to-eat meat

A producer of ready-to-eat meat must implement a food safety management system that identifies, evaluates and controls hazards, and meets the requirements in Table 1 or Table 2 to this clause.

Table 1 to clause 4

Document all stages of production
Identify all food safety hazards and controls through the use of a HACCP plan
Document compliance with Standard 3.2.2 of this Code
Document the management system set out in clauses 3.3 to 3.10 of the Australian Standard AS4696-2002

Table 2 to clause 4

Comply with a food safety management system recognised by the relevant authority
--

Editorial note:

‘Hazard’ is defined in Standard 3.1.1 as a biological, chemical or physical agent in, or condition of, food that has the potential to cause an adverse health effect in humans.

‘Relevant authority’ is defined in Standard 1.1.1.

Examples of a food safety management system that a relevant authority may recognise are the Commonwealth Export Control (Meat and Meat Products) Orders 2005 or the Australian Standard AS4696-2002.

5 Additional requirements for uncooked comminuted fermented meat

(1) In this clause –

audit means a review or examination of any, or all requirements of a food safety program which has been conducted by a person approved as being competent in food safety matters relating to UCFM.

batter mix means all the ingredients in the UCFM recipe that have been combined prior to filling a casing.

starter culture means a preparation of micro-organisms prepared for the purpose of fermenting meat which –

- (a) successfully competes for the nutrients in the meat medium; and
- (b) produces microbial inhibitors; and
- (c) is microbiologically safe; and
- (d) produces a controlled reduction of the pH of the meat mix.

UCFM means a comminuted fermented meat which has not had its core temperature maintained at 65°C for at least 10 minutes or an equivalent combination of time and higher temperature during production. To avoid doubt, a UCFM includes comminuted fermented meat which has been heat treated.

validation means obtaining evidence to confirm that the food safety management system is complete and effective and will deliver the expected food safety outcomes.

verification means the use of methods, procedures and tests in addition to monitoring to determine compliance with the food safety management system.

- (2) Unless expressly provided elsewhere in this Code, a UCFM must not be sold unless it is produced in accordance with this clause.
- (3) For the purposes of subclause 5(2), a UCFM may be sold where it is produced using an alternative technology or method specified elsewhere in this Code, provided that the equivalent food safety outcome in this clause is achieved.
- (4) A UCFM must be produced in accordance with a food safety management system under clause 4 which –
 - (a) has been verified and audited to ensure the number of *Escherichia coli* organisms in the final UCFM comply with the microbiological limits in Standard 1.6.1 in this Code; and
 - (b) demonstrates that the production process handles the variations of *Escherichia coli* contamination in the ingoing raw meat ingredients.
- (5) As part of the validation or verification requirements of the food safety management system, the number of *Escherichia coli* organisms must be recorded for the –
 - (a) raw meat ingredients used to make a UCFM; and
 - (b) product after fermentation and any subsequent process.
- (6) During UCFM production the following matters must be monitored and recorded at suitable frequencies –
 - (a) the pH of a fermenting UCFM; and
 - (b) the temperature and time of fermentation of UCFM; and
 - (c) the temperature and time of maturation/drying of UCFM; and
 - (d) the temperature and time of smoking of UCFM; and
 - (e) the weight loss or water activity.
- (7) The measurements recorded under subclauses (5) and (6) must be kept for 12 months after the use-by date or best-before date of a UCFM.
- (8) The fermentation of a UCFM must be initiated through the use of a starter culture.
- (9) A previously fermented or fermenting meat must not be used as –
 - (a) a starter culture; or
 - (b) an ingredient in a UCFM.
- (10) Meat and batter mix used in the preparation of a UCFM must, if stored by the manufacturer, be stored at 5°C or below prior to fermentation.
- (11) The pH of a fermenting UCFM must be measured in accordance with Method 1 in the Schedule.

Editorial note:

UCFM food businesses should note the skills and knowledge requirements in clause 3 of Standard 3.2.2.

Editorial note for New Zealand:

For New Zealand the processing of UCFM is regulated under the *Food Act 1981*.

SCHEDULE

Methods of Analysis

1 Meat Determination of pH.

Mince a representative portion of the sample of the UCFM and place that portion in a stoppered bottle with twice its weight of water. Shake at five-minute intervals for 30 minutes and determine the pH value of the liquid electrometrically at 20°C.

Alternatively, the pH can be determined through the use of calibrated, direct-contact pH probes or meters.

Issues Raised During the Public Consultation on the Draft Assessment Report

The Draft Assessment Report was released for an eight-week public comment period from 25 May 2005 until 20 July 2005. Thirteen submissions were received. The submissions were received from:

- State and Territory Governments

Department of Human Services, Victoria

Safe Food Queensland

Queensland Health

Tasmanian Working Group - Food Safety Programs for Manufactured & Fermented Meats (representing Department of Primary Industries, Water and Environment (Meat Hygiene Standards Section), Department of Health and Human Services (Environmental Health Services), Local Government (Clarence City Council).

Department of Health Western Australia

- Industry Groups

Environmental Health Association (Australia)

Food Technology Association of Victoria Inc

Australian Food and Grocery Council

Meat & Livestock Australia

Australian Meat Industry Council

George Weston Foods Limited

- Department of Agriculture, Fisheries and Forestry
- New Zealand Food Safety Authority

Eleven of the thirteen submissions supported to proposed option to adopt Standard – 4.2.3 Primary Production and Processing Standard for Meat (Division 3 – Production of manufactured and fermented meat) and Standard 4.2.2 – Primary Production and Processing Standard for Poultry Meat (Division 3 – Production of manufactured poultry meat) to apply a food safety management system to producers of manufactured and fermented meats. The remaining two submissions made no direct comment.

Despite the support for the adoption of this Standard, a number of issues, particularly in relation to the definition of ‘producers of manufactured and fermented meats’, were raised. These issues are briefly outlined below with further detail and response in the tables following.

Issues raised in submissions

Six submissions commented on the definition of a producer of manufactured and fermented meats. Comments raised were primarily concerned that the wording of the draft standard may not give effect to the intent of the proposal as the definition of ‘producer of manufactured and fermented meats’ may not capture all businesses intended to be captured. In particular, some submitters felt the definition captured retail premises such as delicatessens or sandwich bars, which was not the intent. Also some submitters felt the idea of extended shelf life (i.e. modified atmosphere packaging) was not clearly stated, and that the inclusion of whole products was not warranted.

Many of the issues raised could be resolved by clarifying the definition either through the drafting of the standard or through the interpretive guide (see section 5.1 of the Final Assessment Report).

Other major issues that were raised in the submissions include:

- the justification behind all manufactured and fermented meats being included in Standard 4.2.3 (three submissions) (see section 5.1 of the Final Assessment Report);
- the ability to reference the Australian Standard (AS 4694:2002) in Standard 4.2.3 (two submissions) (see attached table);
- the potential duplication of auditing during the implementation of Standard 4.2.3 (two submissions) (see section 5.2 of the Final Assessment Report);
- the recognition of equivalent food safety programs (two submissions) (see attached Table);
- the relocation of the labelling standard for fermented comminuted meat products into Standard 4.2.3 (one submission) (see attached table); and
- the potential increase in businesses affected by Standard 4.2.3 and the subsequent impact on the cost / benefit analysis (one submission) (see section 7.1 of the Final Assessment Report).

GENERAL COMMENTS IN RESPONSE TO THE DRAFT ASSESSMENT REPORT	
Department of Human Services, Food Safety Unit, Victoria. Victor de Paola	<ul style="list-style-type: none"> Victoria supports the intention of P289.
Environmental Health Association (Australia) Phil Oorjitham	<ul style="list-style-type: none"> EHA provides general support for P289. EHA supports that P289 provides a framework consistent with export requirements.
Food Technology Association of Victoria Inc David Gill	<ul style="list-style-type: none"> FTA Victoria supports the adoption of Standard 4.2.2 and 4.2.3.
Safe Food Queensland Kerry Bell	<ul style="list-style-type: none"> SFQ supports the adoption of Standard 4.2.2 and 4.2.3.
Australian Food and Grocery Council Joan Cort	<ul style="list-style-type: none"> AFGC fully supports the adoption of Standard 4.2.2 and 4.2.3.
Meat & Livestock Australia Ian Jensen	<ul style="list-style-type: none"> MLA does not hold a view on the practicality, enforceability or cost effectiveness of the proposal.
Australian Meat Industry Council Conrad Blaney	<ul style="list-style-type: none"> AMIC supports the review process provided by FSANZ and suggests that the classification and definitions contained in the DAR be carefully considered from the proposals of the Advisory Group.
Queensland Health Gary Bielby	<ul style="list-style-type: none"> Queensland Health supports the adoption of Standard 4.2.2 and 4.2.3, conditional on clarifying the definition.
Department of Health Western Australia Jim Dodds	<ul style="list-style-type: none"> Department of Health Western Australia supports the adoption of Standard 4.2.2 and 4.2.3.
Tasmanian Working Group (representing DPIWE, DHHS, Local Government and Local Industry) Chris Lyll	<ul style="list-style-type: none"> The Tasmanian Working Group supports the adoption of Standard 4.2.2 and 4.2.3.
Department of Agriculture, Fisheries and Forestry (DAFF) Richard Souness	<ul style="list-style-type: none"> DAFF supports the adoption of Standard 4.2.2 and 4.2.3.
New Zealand Food Safety Authority (NZFSA) Tim Knox	<ul style="list-style-type: none"> NZFSA supports the adoption of Standard 4.2.2 and 4.2.3, recognising that the standard will only apply in Australia.
George Weston Foods Limited Fiona Fleming	<ul style="list-style-type: none"> George Weston Foods supports the adoption of Standard 4.2.2 and 4.2.3.

RELEVANT ISSUES – DRAFTING OF THE STANDARD		RESPONSE
General matters		
Environmental Health Association (Australia) Phil Oorjitham	<ul style="list-style-type: none"> The proposed standards appear to extract and reword parts of the Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (AS 4696:2002). This could cause conflict if the Australian Standard is updated in the future. Suggest referencing AS 4696:2002 in the standards. 	<p>FSANZ Office of Legal Counsel advises that specific clauses of the Australian Standard can be referred to for the sake of specificity. The entire Australian Standard should not be referred to, as the entire standard is not required under Standard 4.2.3.</p> <p>As a member of the Meat Standards Committee, FSANZ will be kept informed of, and participate in, reviews and updates of Australian Standards relating to meat.</p>
Australian Food and Grocery Council Joan Cort	<ul style="list-style-type: none"> AFGC recommends adopting AS 4696:2002 by reference to alleviate any potential conflict between the Food Standards Code and the Australian Standard in the future. 	<p>FSANZ will ensure ongoing communication with relevant stakeholders to clarify any confusion regarding the relationship between the Australian Standards, Meat Standards Committee and the activities of FSANZ.</p>
Safe Food Queensland Kerry Bell	<ul style="list-style-type: none"> Suggests that Clause 8 of Standard 2.2.1 relating to the labelling of fermented comminuted meat products be relocated to Standard 4.2.3. 	<p>FSANZ Office of Legal Counsel advises that Clause 8 of Standard 2.2.1 be retained in its current location as moving it may impact on other standards that call up Standard 2.2.1. The location of specific standards with respect to Primary Production and Processing Standards will be reviewed at a later date.</p> <p>FSANZ will include references to relevant standards in the Food Standards Code (particularly Standard 2.2.1) in the interpretive guide.</p>
Tasmanian Working Group (representing DPIWE, DHHS, Local Government and Local Industry) Chris Lyall	<ul style="list-style-type: none"> Questions whether Part (b) of the definition for producer of manufactured and fermented meats conflicts with the <i>Model Food Act</i> by applying to retail within a Chapter 4 (Primary Production and Processing) Standard. Also suggest that the relationship of the standard with Chapter 3 needs to be explained in the “<i>Purpose and commentary</i>”. 	<p>FSANZ Office of Legal Counsel advises that the definition for producer of manufactured and fermented meats is consistent with the model agreed by jurisdictions for the PPP Standard for Seafood and does not provide a conflict with the <i>Model Food Act</i>.</p> <p>FSANZ Office of Legal Counsel acknowledges that the relationship of the standard with Chapter 3 needs to be explained in the ‘Purpose and Commentary’ and will do this towards the end of the standard drafting process.</p>

Definition of ‘Producer of Manufactured and Fermented Meats’		RESPONSE
Department of Human Services, Food Safety Unit, Victoria. Victor de Paola	<ul style="list-style-type: none"> The proposed definition of ‘handling’ in P289 is not consistent with the definition of ‘handling’ under the Model Food Act and Standard 3.1.1. This may create an area of doubt in the mind of a court and consequent enforcement difficulties. 	<p>FSANZ Office of Legal Counsel does not consider that present drafting will create an area of doubt in the mind of a court. However, clarification could be made in the ‘Purpose and Commentary’ section and/or in the interpretive guide.</p>
	<ul style="list-style-type: none"> The wording of the draft standard may not give effect to the intent of the proposal. The definition of “producer of manufactured and fermented meats” may not capture all businesses intended to be captured. Point ‘a’ of the definition for producer of manufactured and fermented meats suggests that businesses that preserves, cooks or thaws these meats (without handling them as defined) are captured. DHS would like to see clarification of this definition to ensure retail premises that either do not allow the meats off site or who do allow the meats off site but not packaged in a way that meets the definition of ‘handling’ under P289, are clearly excluded from any standard. 	<p>The Advisory Group reconfirmed that the intent is to capture all those businesses that either produce/manufacture manufactured and fermented meats or that package such meats for an extended shelf life.</p> <p>The Advisory Group requested that FSANZ clarify the definition of ‘producer of manufactured and fermented meats’, both in the standard and in the interpretive guide.</p> <p>The Advisory Group recommended that the FAR elaborate that some products are included in the definition because their manufacture includes a kill step and this step must be monitored, as opposed to it being implied that the products are high risk. It must also be recognised and clearly stated in the FAR that whole muscle meats and luncheon meats are currently produced under a HACCP-based system.</p>
Australian Meat Industry Council Conrad Blaney	<ul style="list-style-type: none"> Whole products should not be included in the RTE definition. The RTE definition should be an extension of the manufacturers of fermented meats that stipulates shaving or slicing is carried out at the manufacturers premises prior to sale with the intention that the product will have an extended shelf life. A large proportion of these RTE products are not further value-added after the fermenting, drying and/or cooking steps in their packaging and are released for sale in that form. In this case these products would not be deemed to be at risk for the purposes of the RTE definition. 	
Queensland Health Gary Bielby	<ul style="list-style-type: none"> The proposed definition inappropriately captures certain businesses into food safety program requirements in conflict with the Ministerial Policy Guidelines. 	

Definition of ‘Producer of Manufactured and Fermented Meats’		RESPONSE
Meat & Livestock Australia Ian Jensen	<ul style="list-style-type: none"> ▪ MLA suggests separating RTE meat from manufactured and fermented meat in the definition. ▪ The inclusion of point (g) under the definition of RTE meat is not needed or justified. ▪ MLA suggests defining <ul style="list-style-type: none"> ○ RTE meat as: meat products that are intended to be consumed without further heating or cooling; and ○ manufactured and fermented meat as RTE meats that are: <ul style="list-style-type: none"> ▪ fermented; ▪ cooked and sliced, shaved or diced and then packed in modified atmosphere or under vacuum for retail sale; or ▪ pâté that is packed following a thermal process. 	
New Zealand Food Safety Authority (NZFSA) Tim Knox	<ul style="list-style-type: none"> ▪ Internationally recognised processing categories for RTE products should be used such as raw cured shelf stable meats, dried meats, cooked perishable uncured meats and cooked perishable cured meats (ICMSF definitions supplied). ▪ The definition of handling should be broadened to include other types of packaging (currently limited to modified atmosphere packaging). 	
Tasmanian Working Group (representing DPIWE, DHHS, Local Government and Local Industry) Chris Lyall	<ul style="list-style-type: none"> ▪ Standard 4.2.3, Clause 4 requirements for food safety programs for producers who are only handling RTE meat need more clarity. ▪ Standard 4.2.2, Clause 3 currently applies to producers of manufactured chicken meat. Should the clause also apply to fermented chicken meat. ▪ Standard 4.2.2, Clause 3 should be amended to apply to poultry not just chicken meat. 	Standard 4.2.2, Clause 3 will be amended to clarify that it applies to manufactured poultry meat products.

RELEVANT ISSUES – RISK ASSESSMENT		RESPONSE
Safe Food Queensland Kerry Bell	<ul style="list-style-type: none"> SFQ requests FSANZ to confirm the basis for considering the production of manufactured meats being high risk. 	The Final Assessment Report will discuss that some products are included in the definition because their manufacture includes a kill step and this step must be monitored, as opposed to it being implied that the products are high risk. The Final Assessment Report will also recognise and clearly state that whole meats and luncheon meats are currently produced under a HACCP-based system.
Australian Meat Industry Council Conrad Blaney	<ul style="list-style-type: none"> There appears to be no evidence base for the inclusion of certain smallgood products (i.e. luncheon meats and muscle meats) in this standard. 	
Meat & Livestock Australia Ian Jensen	<ul style="list-style-type: none"> There appears to be no evidence base for the inclusion of certain products (i.e. pates which are cooked in their container, whole luncheon meats and whole muscle meat products) in this standard. MLA recommends citing the publications provided in the Final Assessment Report, in addition to the MLA risk profile report. 	
		FSANZ will cite the publications provided by MLA alongside the risk profile report in the Final Assessment Report (see Attachment 3 – Bibliography of the Final Assessment Report).

RELEVANT ISSUES – COST / BENEFIT ANALYSIS		RESPONSE
Australian Meat Industry Council Conrad Blaney	<ul style="list-style-type: none"> The number of businesses affected would be significantly larger than that identified in the National Risk Validation Project as businesses producing low risk products (i.e. whole cooked meats and luncheon meats) would be covered. This would affect the cost/benefit analysis. 	These businesses that produce whole cooked muscle meats and luncheon meats must currently comply with the Australian Standard.

RELEVANT ISSUES – IMPLEMENTATION		RESPONSE
Auditing		
Environmental Health Association (Australia) Phil Oorjitham	<ul style="list-style-type: none"> In WA, the Health (Meat Hygiene) Regulations 2001 have provisions for auditing. P289 does not have provisions for auditing it may be necessary for the Food Standards Code to operate concurrently with the Meat Hygiene Regulations in order that auditing requirements are legislated in Western Australia. 	The Health (Meat Hygiene) Regulations 2001 adopt and require compliance with the Australian Standards relevant to the meat processing industry, however do not contain any provisions related to auditing. Currently, auditing is carried out administratively. Legislation related to auditing will be contained in the Western Australian Food Act when introduced.
Australian Food and Grocery Council Joan Cort	<ul style="list-style-type: none"> The AFGC is concerned that any new standard should not result in additional auditing. The AFGC has acknowledged that this is the responsibility of the States and Territories, but seeks FSANZ's help in ensuring consistency in the process, use and recognition of auditors. 	FSANZ recognises these concerns and is an active participant developing a National Food Safety Audit policy through the FRSC Implementation Sub-Committee (ISC).

Recognition of Equivalence		RESPONSE
Safe Food Queensland Kerry Bell	<ul style="list-style-type: none"> In QLD the Food Production (Safety) Act 2000 and associated regulations require persons producing fermented and manufactured meats to develop, implement and comply with a food safety program. SFQ seeks recognition of such a program under Standard 4.2.3. 	Table 2 to Clause 4 of Standard 4.2.3 allows for the producer to “comply with a food safety management system recognised by the relevant authority”.
Australian Food and Grocery Council Joan Cort	<ul style="list-style-type: none"> The standard must be consistent with or have equivalent requirements to the Australian Standard 4696:2002, CODEX and ISO HACCP requirements. 	The Standard as drafted requires either a CODEX or AS4696-2002 HACCP plan. The Meat Standards Committee has recently examined and concluded that the principles underpinning the Australian Standard are consistent with those embodied within the Codex Code of Hygienic Practice for Meat.
New Zealand Food Safety Authority (NZFSA) Tim Knox	<ul style="list-style-type: none"> Some guidance should be given as to what is expected in terms of frequency and statistical validity for recording of E. coli numbers for the raw ingredients used to make a UCFM and product after fermentation. Suggest that clause 9(b) be amended to allow use of fermented meat ingredients produced under a validated fermentation process e.g. previously fermented meat that has been cooked could be reworked and used as an ingredient. 	The interpretive guide will include material to address this. FSANZ recently completed a review of processing requirements for UCFM products ¹⁰ and revised the relevant standards in the Code.

¹⁰ Typical UCFM includes various types of salami, summer sausage and mettwurst. As indicated by its name, production of UCFM involves no cooking step. Microbiological pathogens in the raw meat ingredients, such as enterohaemorrhagic *Escherichia coli*, *Salmonella* species and *Listeria monocytogenes* are killed by the fermentation, maturation/drying steps employed in UCFM production.

Bibliography

Allen Consulting Group (2002) Food Safety Management Systems – Costs, Benefits and Alternatives. Department of Health and Ageing, Canberra.

Food Science Australia and Minter Ellison Consulting (2002) National Risk Validation Project- Final Report. Department of Health and Ageing, Canberra.

Meat and Livestock Australia (2003) Through Chain Risk Profile for the Australian Red Meat Industry (PRMS.038c). Meat and Livestock Australia, North Sydney.

Pointon, A., Jenson, I., Jordan, D., Vanderlinde, P., Slade, J. and Sumner, J. (2005) A risk profile of the Australian red meat industry: Approach and management. Food Control. In press. Available online at www.sciencedirect.com

Sumner, J., Cameron, S., Tan, A., Jenson, I., and Pointon, A. (2005) A risk profile of the Australian red meat industry: hazard identification. Food Australia. In press.

Sumner, J., Ross, T., Jenson, I., and Pointon, A. (2005) A risk profile of the Australian red meat industry: risk rankings of hazard:product pairs. Int. J. Food Microbiol. In press.

Food Regulation Standing Committee (2002) Ministerial Policy Guidelines on Food Safety-Management in Australia: Food Safety Programs. Department of Health and Ageing, Canberra.