Proposed Changes to the *Campylobacter* Performance Target (Phase 1)

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BIOSECURITY NEW ZEALAND

NEW ZEALAND FOOD SAFETY AUTHORITY

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This publication is also available on the MAF website at
http://www.foodsafety.govt.nz/consultation/

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Appendix 1 Proposed Changes to Schedule 1 of Animal Products (National Microbiological Database Specifications) Notice 2011 **21**

Submissions

The Ministry of Agriculture and Forestry (MAF) now incorporates the New Zealand Food Safety Authority (NZFSA). MAF invites public comment on this discussion document which outlines **proposals to amend the Animal Products (National Microbiological Database Specifications) Notice 2011 including parts of Schedule 1.**

The following points may be of assistance in preparing comments:

- Wherever possible, comment should be specific to a particular section in the document. All major sections are numbered and these numbers should be used to link comments to the document.
- Where possible, reasons and data to support comments are requested.
- The use of examples to illustrate particular points is encouraged.
- As a number of copies may be made of your comments, please use good quality type, or make sure the comments are clearly hand-written in black or blue ink.
- Please include the following information in your submission:
- The title of the discussion document;
- Your name and title (if applicable);
- Your organisation's name (if applicable); and
- Your address.

A template has been included on the next page should you wish to use it.

Please submit your response by 5:00pm on Friday 17 June 2011. Your comments should be sent to:

Gail Duncan
NZ Standards
PO Box 2835
WELLINGTON 6140
Or email Gail.Duncan@maf.govt.nz
Fax: (04) 894 2643

The Official Information Act

The Official Information Act 1982 (the OIA) states that information is to be made available unless there are grounds for withholding it. The grounds for withholding information are outlined in the OIA. Submitters may wish to indicate any grounds for withholding information contained in their submission. Reasons for withholding information could include that information is commercially sensitive or that the submitters wish personal information such as names or contact details to be withheld. MAF will take such indications into account when determining whether or not to release information. Any decision to withhold information requested under the OIA may be reviewed by the Ombudsman.

Submissions Template

To: Gail Duncan, NZ Standards, PO Box 2526, WELLINGTON 6140
Or email Gail.Duncan@maf.govt.nz Or Fax: (04) 894 2643

Submission on the May 2011 proposal to amend the Animal Products (National Microbiological Database Specifications) Notice 2011 including parts of Schedule 1.

Submitter's name and title (if applicable):
Submitter's organisation's name (if applicable):
Submitter's address:

	Yes	No	Reasons / Comments
Do you support MAF's proposal to reduce VLT sampling and testing as written (i.e. reduce from 5 to 3 *Campylobacter* samples per processing period, retain 1 *Salmonella* sample per processing period and remove *E.coli* sampling)?			
Would you like *E.coli* testing to remain as a voluntary option?			
Do you support MAF's proposal to change the triggers for responses to non-compliances to adjust for the smaller number of samples taken. (i.e. from 2 or more out of 5 samples to 2 or more out of 3 samples for a High Count Failure, and from 3 or more out of 15 samples to 2 or more out of 9 samples for a Moving Window Failure)?			
Do you support MAF's proposal to change 2 definitions in the Animal Products (National Microbiological Database Specifications) Notice 2011 so that all chicken primary processors are required to participate in NMD?			
Do you support MAF's proposal to increase the flexibility in how Operators and MAF respond to non-compliances?			

Other comments:

Attach further sheets if required.

Signed: _____ Date: ____/____/____

1 Introduction

In 2008 the New Zealand Food Safety Authority (NZFSA) mandated *Campylobacter* Performance Targets (CPT) for the poultry industry at the end of primary processing of broiler chickens. Full details can be found in the National Microbiological Database (NMD) requirements[1] including sampling, test methodology, non-compliances and their associated responses.
The CPT has been implemented for long enough to identify both the pros and cons of the system. NZFSA (now part of MAF) has agreed to review the requirements this calendar year. The CPT review has been split into 2 phases:

Phase 1 looks at changes to improve the practical application of the programme and/or ensure that compliance costs are minimised where appropriate. These are changes which could be actioned relatively promptly (i.e. with an aim of implementing the changes on 1 July 2011).
Phase 2 looks at more complex changes that need to be subject to rigorous analysis prior to finalisation. This includes a review of how the target contributes to the goals set under the *Campylobacter* Strategy and whether MAF's goals, the CPT targets, or the associated programme need to be amended.
This paper covers Phase 1 of the review which largely addresses issues of particular relevance to very low throughput premises. It will however impact on all primary processors of chickens.

Phase 2 will be issued later this year.

1.1 BACKGROUND

Feedback from industry and/or MAF regarding the implementation of the CPT has identified a number of issues. The areas that MAF considers can be improved relatively quickly and easily (and therefore form Phase 1 of the Review) include:

- compliance costs for very low throughput (VLT) processors,
- clarity on who must participate in NMD, and
- an increase in flexibility in how the Operator and MAF respond to non-compliances.

This paper gives proposals in each of the above three areas.

1.2 SUMMARY OF PROPOSED AMENDMENTS

MAF has assessed the pros and cons of the status quo against one or more alternative options to address the above issues of concern. MAF then identified a preferred option to address the issue which is reflected in the proposals below. MAF's assessment of each proposed amendment is described in more detail in section 2 of this paper.

1.2.1 Reduction in VLT Sampling and Testing

MAF proposes to reduce the number of samples that a VLT premises must take each processing period for *Campylobacter* testing from 5 to 3.

MAF also proposes to cease *E.coli* testing for VLT premises.

There would be no change for the requirement to test one randomly selected carcass for *Salmonella*.

[1] http://www.foodsafety.govt.nz/elibrary/industry/animal-products-national-nmd/schedule-2011.pdf

There would need to be an amendment to the wording defining failures to adjust for the reduced sampling. This is explained in section 2.1 under Option 2.

This would result in cost savings for VLT premises whilst maintaining the statistical integrity of *Campylobacter* data. *E.coli* results are useful to confirm hygienic processing but are not otherwise used by MAF so this is seen as a "nice to have" rather than essential data set.

1.2.2 Clarify Participation in NMD

MAF proposes to change 2 definitions in the Animal Products (National Microbiological Database Specifications) Notice 2011:

Current Definitions	Proposed Definitions
Operator means an Operator of a premises that carry out (a) primary processing of …poultry for human consumption; and …	**Operator** means an Operator of a premises that carry out (a) primary processing of …chickens for human consumption; and …
poultry means broiler chickens	**chickens** means birds of the species *Gallus gallus*

This is simpler and less confusing to implement as all chicken primary processors would be required to participate in NMD. This would also minimise likelihood of misrepresenting the chicken industry's performance that can occur if only some processors are participating, even if they are only contributing a small proportion of the total production. It also provides equity between processors and ensures that all chickens are subject to the target and responses to non-conformances, thus protecting consumers.

1.2.3 Increase Flexibility in Responses to Non-Compliances

MAF proposes to increase the flexibility in how Operators respond to non-compliances so that the actions which are most likely to be effective can be taken first. MAF also proposes to take a case by case approach to managing responses 4 and 5 by selecting appropriate experts/officers depending on the nature of the problems to assist the Operator to comply, or to apply sanctions where necessary to protect the consumer – with checks and balances to ensure consistency and appropriateness of actions.

This will ensure that corrective action is targeted at the problem area(s) resulting in more timely and cost effective action.

1.3 NEXT STEPS

Following the closing date for submissions 5:00pm on Friday 17 June 2011, all submissions will be considered and analysed before any amendment to the NMD specification is finalised. If MAF determines that an amendment is necessary, it will be signed by the person with Delegated Authority under the Animal Products Act 1999 and will come into force on 1 July 2011 (in time for the next quarter as set up in NMD).

2 Proposals

2.1 PROPOSAL TO REDUCE VLT SAMPLING AND TESTING

Issue: VLT poultry processors met with MAF representatives on 3 February 2011 to raise concerns about compliance costs. One of the discussions was how NMD costs are proportionately higher per bird for plants processing a very small number of birds.

Background:
In the original NMD programme that commenced in 2001 VLT Operators were required to test 1 carcass each processing week for *E.coli* and *Salmonella*.

When the Poultry NMD *Campylobacter* programme commenced in March 2007 the NMD sampling programme carried over with one more carcass to be selected for *Campylobacter* testing.

The current *Campylobacter* performance target limits were developed in 2007 by a review of the initial 6 months data from late March 2007 to October 2007. The number of samples for VLT was also reviewed, as the number of samples received per quarter was found to be statistically insignificant.

In 2008, to ensure adequate numbers of samples for *Campylobacter* statistics VLT samples were increased from 1 sample per processing week tested for *E.coli*, *Salmonella* and *Campylobacter* to 5 samples per week; each of the 5 samples tested for *Campylobacter* (5 tests), with one tested for *E.coli* and one for *Salmonella*.

Current Situation:
Schedule 1 of the Animal Products (National Microbiological Database Specifications) Notice 2011 defines VLT poultry processors as those that slaughter one million (1,000,000) birds or fewer per annum and all other poultry processors as Standard Throughput (ST). Current sampling and testing requirements can be found in sections 2 and 3 of Schedule 1 of that Notice. These requirements are summarised below:

	Samples	Tests	Testing Costs	Courier Costs
VLT	5 per processing perriod (week)	5 *Campylobacter* 1 *Salmonella* 1 *E.coli*	$300 a week or $0.75-$1.50 a bird if processing 200-400 birds a week	1/week
ST	3 per day	3 *Campylobacter* 1 *Salmonella* 2 *E.coli*	≤ $0.05 a bird	1/day

33% (4/12) of all poultry processing premises required to participate in the NMD programme meet the definition of VLT.

Two VLT premises are currently participating in the NMD programme. Both of these premises process 200-400 birds a week = 10,400 – 20,800 birds per annum. Of the other two premises, one is currently in the process of starting up slaughter operation and will be processing around 700,000 birds per annum. The other operation processes 1,600 birds a week, i.e. 83,000 birds per annum. They are currently doing some testing but are not participating in the NMD programme due to confusion over the definition of a broiler. This issue is being addressed in proposal 2.2.

MAF agrees that compliance costs should be reduced for VLT processors so long as the technical credibility of the programme can be maintained. MAF has therefore looked at a number of options for VLT sampling and testing. Any changes for ST premises will be considered as part of the larger CPT review.

2.1.1 Options for VLT Sampling and Testing

2.1.1.1 Option 1: Status Quo

In this Option the sampling requirements as per the NMD Notice 2011, schedule 1 remain the same. This means that premises that process **broiler chickens**[2] must take five samples per week on one processing day which must be analysed for:

- *Campylobacter* for each carcass, and
- *Salmonella* for one of the five carcasses, and
- *E.coli* for one of the five carcasses.

It is important that the number of samples taken is statistically valid. Each quarter in NMD relates to 13 weeks. The quarterly ranked lists consider any premises with less than 13 samples to have "low sample numbers".

An analysis of VLT sampling from the 4th quarter of 2009 until 21st March 2011 showed that premises took an insufficient number of samples per quarter for *E.coli* testing 19 times. If 3 or more samples were taken every premises would meet the minimum requirement.

Pros	Cons
• Some data is being collected from VLT premises. • Based on statistically-defined sampling for throughput. • Applies the CPT irrespective of processor size in recognition that VLT premises influence human cases within a confined catchment area. • Ensures that VLT premises meet same targets as ST premises.	• NMD sampling for a VLT premises on average costs $300 a week plus courier costs. Testing alone costs a VLT Operator processing 200-400 birds a week around $0.75-$1.50 a bird (c.f. Std throughput @ ≤ $0.05 a bird). • Not all premises are included if they don't process broilers – these are usually VLT premises. • No recognition of good performance against CPT. • Insufficient samples tested for *E.coli* to be statistically valid.

2.1.1.2 Option 2: Reduced Sampling and Testing for VLT Premises

This Option would reduce the number of samples required per week under the NMD for poultry VLT Operators. It is important that any such reduction does not result in too few samples being taken for results to be statistically valid. Each quarter in NMD relates to 13 weeks. The quarterly ranked lists reports any premises with less than 13 samples as having "low sample numbers".

[2] Broiler chicken means a male or female chicken kept primarily for meat production, but does not include poussins.

1. *Campylobacter* testing

An analysis of VLT sampling from the 4th quarter of 2009 until 21st March 2011 was undertaken to see whether all VLT premises would take at least 13 *Campylobacter* samples each quarter if the sample numbers were 1, 2, 3 or 5 per sampling week. This analysis showed that if only one sample was taken then premises would not have met the minimum requirement of 13 samples 9 times. If 2 samples were taken, this reduced to 2 times. If 3 or more samples were taken every premises met the minimum requirement.

MAF therefore proposes to reduce VLT samples from five to three whole carcass rinse samples per processing period. Each sample to be analysed for *Campylobacter*.

MAF has reviewed VLT data from the first and second quarters of the 2010/2011 season (i.e. from October 2010 until 21st March 2011). If results from 3/5 *Campylobacter* samples are reviewed the prevalence, mean, standard deviation, median, mode, minimum, 80th 95th and 98th percentiles and maximums of the 3 data set and the 5 data set are very similar. Using One-way Analysis of Variance, the confidence interval for the 3 sample data set is wider than the 5 sample set, but completely overlaps the 5 sample set. The wider confidence interval is to be expected for a smaller data set. This and a high P value show that the data sets are related.

To minimise administrative changes needed to the NMD database, and to keep alignment with targets required of standard throughput (ST) premises, the levels of *Campylobacter* which count towards a failure need to remain the same, i.e. 5.88 log10CFU/carcass for a High Count Failure (HCF) and 3.78 log10CFU/carcass for a Moving Window Failure (MWF). Also the number of processing periods that make up a moving window need to remain the same, i.e. 3.

As it is proposed that the number of samples within the processing period reduces to 3, there needs to be consideration of how many times the premises can be above the failure level before responses are activated. The aim is to set this up in a manner that triggers responses at approximately the same rate as under the current system.

MAF analysed data from the first and second quarters of the 2010/2011 season from all VLT premises to work out how to achieve this.

a) HCF

There were no results exceeding the HCF limit of 5.88 log10CFU/carcass, thus no responses have been generated. It is proposed to leave the trigger at 2 or more out of 3 samples. The limit itself will be considered as part of phase 2 of the review.

b) MWF

Leaving the trigger at 3 or more results out of 9 samples exceeding 3.78 log10CFU/carcass generates less responses than for 15 samples.

Decreasing the trigger to 2 or more out of 9 samples exceeding 3.78 log10CFU/carcass generates the same pattern of responses as the current trigger for 15 samples.

Raising the trigger to 4 or more out of 9 samples exceeding 3.78 log10CFU/carcass would not generate sufficient responses to ensure that corrective action was taken in a timely manner.

Current and proposed limits are shown below.

Current Limits	Proposed Limits
High count failure (HCF) when 2 or more out of 5 samples from a single processing periods are greater than 5.88 $\log_{10}$ cfu/carcass. Moving window failure (MWF) when 3 or more out of 15 samples from 3 successive processing periods are greater than 3.78 $\log_{10}$ cfu/carcass.	High count failure (HCF) when 2 or more out of 3 samples from a single processing period are greater than 5.88 $\log_{10}$ cfu/carcass. Moving window failure (MWF) when 2 or more out of 9 samples from 3 successive processing periods are greater than 3.78 $\log_{10}$ cfu/carcass.

2. *Salmonella* testing

It is proposed that *Salmonella* testing remain at one carcass per week. *Salmonella* results are important to inform the *Salmonella* strategy. As this is not an enumerative test and there are currently no pass/fail targets, MAF considers that the prevalence data generated from 1 sample per processing period is sufficient to deliver meaningful results over time. This may be reviewed as part of Phase 2 of the review.

MAF therefore proposes to keep *Salmonella* testing at one per processing period.

3. *E.coli* testing

Using similar logic to that used above for *Campylobacter*, it would be necessary to increase *E.coli* samples to 3 per sampling week to get sufficient results per quarter. MAF has considered the use made of this data and decided:

- *E.coli* results are not critical for the attainment of *Campylobacter* standards (but are useful as an indicator of process hygiene),
- Results submitted by many VLT premises are less than 13 per quarter (as above), and
- Raising the number of tests per week to attain a statistically valid number for *E.coli* would incur unnecessary expense to VLT Operators.

MAF therefore proposes to remove *E.coli* testing (or it could be retained as a voluntary test).

Pros	Cons
• Still provides for statistical input into nationwide processing performance. • Would reduce sampling and testing costs by approximately ½. • Courier costs would not change. • Little change needed to NMD database set up.	• If the number of samples greater than 3.78 $\log_{10}$ cfu/carcass that gave a noncompliance was left at 3 or more (out of 9 rather than 15) there would be more response 1 and 2 results. • If the number of samples greater than 3.78 $\log_{10}$ cfu/carcass that gave a noncompliance was raised to 4 or more (out of 9 rather than 15) there would not be enough responses to identify the poor performers.

2.1.1.3 Option 3: Remove the CPT Requirements for VLT Premises

This Option would remove the requirement for poultry VLT premises to participate in NMD.

Pros	Cons
• Immediate cost saving to participating VLT premises	• Fails to give MAF a nationwide picture of broiler processing performance for the CPT • Ignores small community reach effect and impact on isolated *campylobacteriosis* outbreaks. • Processors often believe that their process is microbiologically acceptable if they have a visually clean process and good verification results. This can be misleading as microbiological results are impacted by a complex series of risk factors including the loading on the bird entering the plant, the hygienic practices during processing as well as additional decontamination measures. The decontamination measures are often inadequate but this can only be established through product testing. • New Operators often do not have the technical capability to address *Campylobacter* contamination initially. They generally start up as VLT premises. It is important to get these premises into the programme so they become compliant in a timely manner. • Smaller processors' *Campylobacter* counts to date have mostly been the same or worse than ST premises. It is inappropriate to allow some premises to produce contaminated product purely on the basis of throughput. This product will be sold and put a small number of consumers at risk of illness.

2.1.1.4 Option 4: Performance-Based Requirements for CPT for VLT Premises

This Option would require Operators to demonstrate compliance with the CPT over a defined time period, and then to drop to a reduced sampling regime until a non-compliance was detected. This would reward good performers and keep compliance costs down, but is complex and may require substantial changes to the database, so will be considered under Phase 2 of the CPT review.

2.1.2 Preferred Options for VLT Sampling and Testing / Proposal

MAF supports Option 2 above, i.e. reduced sampling and testing for VLT premises, and proposes to add this amendment into the NMD Programme. MAF is also keen to explore Option 4 in the future as part of Phase 2 of the review.

Current Sampling and Testing	Proposed Sampling and Testing
5 samples to be taken per processing period (week). 5 tested for *Campylobacter* 1 tested for *Salmonella* 1 tested for *E.coli*	3 samples to be taken per processing period (week): 3 tested for *Campylobacter* 1 tested for *Salmonella*

Current Failure Definitions	Proposed Failure Definitions
High count failure (HCF) when 2 or more out of 5 samples from a single processing periods are greater than 5.88 $\log_{10}$ cfu/carcass. Moving window failure (MWF) when 3 or more out of 15 samples from 3 successive processing periods are greater than 3.78 $\log_{10}$ cfu/carcass.	High count failure (HCF) when 2 or more out of 3 samples from a single processing periods are greater than 5.88 $\log_{10}$ cfu/carcass. Moving window failure (MWF) when 2 or more out of 9 samples from 3 successive processing periods are greater than 3.78 $\log_{10}$ cfu/carcass.

MAF is also keen to explore Option 4 in the future as part of Phase 2 of the review.

2.2 PROPOSAL TO CLARIFY PARTICIPATION IN NMD

Issue: Not all primary processors of chicken participate in NMD due to lack of clarity of the definition of broilers. Some processors have received conflicting advice from MAF Head Office, evaluators or verifiers on whether or not they are required to participate. This has led to inequities in the system and lack of coverage of the programme. Those processors who are not sampling at all or are taking insufficient samples cannot be reliably judged against the *Campylobacter* performance target, or required to take responses when non-conformances occur. This could lead to customers and consumers receiving more highly contaminated product from those processors.

Current Situation: The Animal Products (National Microbiological Database Specifications) Notice 2011 contains the following definitions:

Current Definitions
Operator means an Operator of a premises that carry out (a) primary processing of …poultry for human consumption; and …
poultry means broiler chickens

"Broiler" is not defined in the legislation so theoretically would be interpreted using a Dictionary definition. Some dictionary definitions are given below:

broiler *n* –

- a young tender chicken suitable for roasting.
- flesh of a small young chicken not over 2 1/2 lb suitable for broiling.

- a type of chicken raised specifically for meat production. Broilers often reach a harvest weight of 4-5 pounds dressed in only five weeks.
- a chicken that is younger and smaller than a roaster.

The above definitions are subject to differing interpretations with respect to "young" and also "weight".

There have also been queries about whether the microbiological profile of "Broilers" processed in the normal manner is different to chickens that are processed with head and feet on, or from layer hens which are older and have eggs present. A recent study[3] shows that end of lays are similar to other chickens with respect to *Campylobacter* contamination. Limited results supplied to MAF by industry suggest that chickens processed with head and feet left on also have similar *Campylobacter* results. It would therefore be possible to include results from all chickens in one database. It would however be useful to capture the variations in bird age and processing method along with the results to enable data analysis as appropriate.

2.2.1 Options for NMD Participation

2.2.1.1 Option 1: Status Quo

This Option would keep the definitions in the Animal Products (National Microbiological Database Specifications) Notice 2011 as is:

Current Definitions
Operator means an Operator of a premises that carry out (a) primary processing of …poultry for human consumption; and …
poultry means broiler chickens

Pros	Cons
• Some Operators happy to be left out of the programme.	• Confusion over broiler definition would remain. • Unclear whether chickens processed with head and feet on are included. • Some premises would not participate in NMD thus causing a Type 1 Error in the programme making it less robust and meaning that they are not categorised as passing or failing the target and not subject to responses for non-conformances. This could result in consumers receiving more highly contaminated product from these processors. • Some Operators have less compliance costs than others purely because of the types of birds they process. This is not justified by a difference in risk. This is iniquitous. Operators who have to comply are not happy that they have more costs than others.

[3] (Final report: FDI / 236 /2005 - Enhancing Surveillance of Potentially Foodborne Enteric Diseases in New Zealand: Human Campylobacteriosis in the Manawatu: Project extension incorporating additional poultry sources prepared by Professor Nigel French and the Molecular Epidemiology and Veterinary Public Health Group - 19th October 2009). See http://www.foodsafety.govt.nz/elibrary/industry/enhancing-surveillance-potentially-research-projects/finalreportducketc2009.pdf

2.2.1.2 Option 2: All Meat Chickens In, Irrespective of Age or Processing Manner, But Layer Hens Out

This Option would change 2 definitions in the Animal Products (National Microbiological Database Specifications) Notice 2011:

Current Definitions	Proposed Definitions
Operator means an Operator of a premises that carry out (a) primary processing of …poultry for human consumption; and …	**Operator** means an Operator of a premises that carry out (a) primary processing of …chickens for human consumption, except those that have been used for egg production; and …
poultry means broiler chickens	**chickens** means birds of the species *Gallus gallus*

Pros	Cons
• This would bring all chicken into the programme except spent hens or end of lays which would make the programme more inclusive than currently and would contribute to a lower overall national *campylobacter* burden. • Less confusion over who is in or out. • It would be a more equitable playing field for all "meat chickens" irrespective of age or process to be included in the programme.	• Extra compliance costs for those not currently in the programme.

2.2.1.3 Option 3: All Chickens In, Including Meat Chickens and Layer Hens

This Option would change 2 definitions in the Animal Products (National Microbiological Database Specifications) Notice 2011:

Current Definitions	Proposed Definitions
Operator means an Operator of a premises that carry out (a) primary processing of …**poultry** for human consumption; and …	**Operator** means an Operator of a premises that carry out (a) primary processing of …**chickens** for human consumption; and …
poultry means broiler chickens	**chickens** means birds of the species *Gallus gallus*

Pros	Cons
• This would bring all chicken into the programme including spent hens or end of lays which would make the programme more inclusive than currently and would contribute to a lower overall national *campylobacter* burden. • Less confusion over who is in or out. • It would be a more equitable playing field for all "chickens" irrespective of age, process or previous uses to be included in the programme.	• Extra compliance costs for those not currently in the programme.

2.2.2 Preferred Options for VLT Sampling and Testing / Proposal

MAF supports Option 3 above, all chickens in, including meat chickens and layer hens, and proposes to change the definitions to bring all chicken processors into the NMD Programme.

2.3 PROPOSAL TO INCREASE FLEXIBILITY IN RESPONSES TO NON-COMPLIANCES

Issue: The current requirements for responses to non-compliances are very prescriptive both with respect to what the Operator is required to do, and also if Response 4 or 5 is reached, what MAF is required to do. In some cases this has resulted in the Operator spending time investigating or fixing things which are not likely to be the main cause of their problems. Also when MAF's Response Team has visited premises, there have usually been more people on the Response Team than is absolutely necessary to deal with the problems. This adds cost at no extra value.

Current Situation: Current requirements can be found in sections 6.8.1 CPT non-compliance, and 6.8.2 Expected Operator response to CPT non-compliance from Schedule 1 of the Animal Products (National Microbiological Database Specifications) Notice 2011.

The poultry processor is expected to take their own escalating corrective actions for Responses 1-3 and at Response 4 MAF (formerly NZFSA) sends in a Response Team to review these actions and determine what else needs to be done to help them become compliant. All of the response levels are quite prescriptive in nature so that there is no possibility that the Operator will overlook an important area for improvement. Once a complete moving window becomes compliant, the responses are reset to zero.

A summary of responses reached by premises participating in NMD since April 2008 is given below. Where a premises has reached Response 4, a summary is also given of regulatory action taken.

Table 1: Responses Reached by Each Premises in NMD

NMD Premises.	Times at R1	Times at R2	Times at R3	Times at R4	Times at R5	Reason for Noncompliance	Regulatory Action Taken	Current Status
A	6	6	5	2	2	General hygiene issues, poor evisceration equipment set up, lack of control of salting, lack of washing (post pluck, post EV) /chemical decontamination steps	CRT visit (Full team), Direction to freeze product	Voluntary shut down despite becoming compliant
B	4	4	4	3	3	Poor separation between kill and EV rooms, plucker splatter, organic so needed extra wash steps and use of approved chemical in multiple decontamination steps	CRT visit (Full team), Direction to freeze product, CRT visit (Part Team)	Compliant since 17/11/ 09

C	2	2	1	1		Insufficient samples, incorrect testing, lack of washing (post pluck, post EV), poor separation between kill and EV rooms, plucker splatter, poor control of chemical decontamination steps	CRT visit (Part Team)	Compliant
D	3	2	1	1		General hygiene issues, line speed too high, lack of staff, poor evisceration equipment set up, lack of washing (post pluck, post EV) /chemical decontamination steps	CRT visit (Full team), Direction to freeze product, Direction to add Citrox	Voluntary shut down despite becoming compliant
E	N/a							Not broilers
F	2	1						Compliant
G	2	1						Compliant
H	2	2						Compliant
I	13	11	1					Compliant
J	1	1						Compliant
K	2	2						Compliant
L								Compliant
M	11	11	6					Compliant
N	N/a							Not broilers
O	N/a							Not yet started

All premises that have been required to participate in NMD have reached Response 1 at some stage. Four premises have reached Response 4 or 5 (see yellow columns) and have required one or more visits from the *Campylobacter* Response Team. In all but one occasion the full team has gone in. On the last occasion this was cut back to a smaller team after feedback from VAFP on the likely reasons for the response level and the willingness of the Operator to take action. On 3 occasions the Operator has been directed to freeze product to protect the consumer due to the delay in the operation becoming compliant. The latest Response 4 issue was resolved without the need to issue a Notice of Direction to freeze product.

2.3.1 International Comparisons

A review of New Zealand's CPT non-compliance and response requirements was carried out. This included a comparison with international requirements for *Campylobacter* controls in Australia, the United Kingdom and the United States. Only the USA requires mandatory responses including:

- repeat sampling for poor performers (unnecessary for NZ as we have a continuous moving window)
- a possible food safety assessment (which is likely to be similar to our *Campylobacter* Response Team visit), and

- possibly a public posting of poor results (which New Zealand has not considered as it could alienate processors unnecessarily and New Zealand's other sanctions protect consumers)

The comparison showed that it is not necessary to adopt current international approaches to dealing with non-compliances as New Zealand's system is already addressing the problem in a manner more suited to our situation.

2.3.2 Options for Responses to Non-compliances

2.3.2.1 Option 1: Status Quo

Pros	Cons
Very clear escalation of responses. Certainty for Operators. Operator is given time to become compliant by themselves if possible before regulatory intervention is required. Assistance provided by appropriate experts to achieve improvements. Costs of Head Office personnel not charged for. The system has resulted in significant improvements by poor performers or other resolutions. The end result is that poor performance has been time limited and managed effectively. The Notices of Directions given to freeze product have allowed processors to keep operating whilst solutions are found.	Operators not always aware that they have reached a response level as there is no automatic notification to them or VAFP that this has occurred. The system relies on the NMD Controller and VAFP to check results themselves and an independent period check by head office staff as a safety net. If Operators are unfamiliar with how to view NMD results on computer, it is difficult for them to know what response they are on. Responses are too prescriptive to deal with all situations and require the Operator to investigate things which they may already know are OK, whilst not necessarily dealing with the problem. The responses should depend on whether the issue relates to sampling and testing, good operating practice, control measures and whether it is a first time or repeat problem, the knowledge of the Operator, the willingness and capability of the Operator to make improvements etc. Too many people in Response Team. Sometimes more CRT members present than processing staff. Does not address costs of visits and who should pay. Not sure whether Compliance and Enforcement Group (CEG) or VAFP time has been charged for. Very formal system – quite overwhelming and scary for some Operators. There has been confusion over how to calculate responses when an Operator is not always operating as not processing broilers. The assignment of high counts for failure to take samples has resulted in one Operator going very quickly up to Response 4 when they were unaware of the requirement and lack of notification allowed this to continue. The Notices of Directions given to freeze product have reportedly affected processors' available markets and their bottom lines.

Pros	Cons
	One bad set of samples can result in 3 moving windows being non-compliant and response escalating despite improvements. Not enough focus on correct sampling in corrective actions. There is not enough clarity about how long after the CRT visit the Operator has to make improvements before Notices of Direction are applied and how they come to be removed. We don't always know whether lack of results in NMD is due to sampling problems, not processing or not processing broilers.

2.3.2.2 Option 2: Change Responses by Operator

In this option it is proposed that there is more flexibility in the responses by the Operator, particularly in the order in which the various areas are reviewed and improved.

Refer to Appendix 1, 6.8.2 Corrective Actions expected at Responses 1 to 3 for suggested wording.

This will allow the Operator to choose the most likely reason for the non-compliance and address this first so that they can resolve the problem as quickly as possible.

Pros	Cons
Responses escalate whilst permitting flexibility so Operator can choose which actions to take first. The responses required under Schedule 1 will now include sampling and testing issues. Operator is given time to become compliant by themselves if possible before regulatory intervention is required. Clearly places responsibility on the Operator to take corrective action whilst still having checks and balances to ensure that problems cannot continue for too long.	

2.3.2.3 Option 3: Change Responses by Regulator

In this option it is proposed that there is more flexibility in the responses by the Regulator, particularly in whether or not a premises visit is necessary, and if so, who carries out the visit. The proposal is that each case is considered on its own merits. MAF's *Campylobacter* expert would review all of the available information to date and develop a proposed response which must be signed off by a Director. This allows flexibility but ensures that there are some checks and balances so that responses are appropriate to the situation.

Refer to Appendix 1, 6.8.2 for current and proposed wording.

Pros	Cons
More flexibility allows appropriate Response to be taken on a case by case basis. Costs minimised as Response Team visit not always necessary.	May be less consistency in responses. MAF needs to manage this so that it can justify action / lack of action especially where sanctions are concerned and taking into account the need to protect the consumer.

2.3.2.4 Option 4: Change Responses by Operator and Regulator

This option is a combination of both Options 2 and 3 above. In summary this option proposes more flexibility in **both** the responses by the Operator and the Regulator.

For the Operator, flexibility would particularly be in the order in which the various areas are reviewed and improved. For the Regulator, flexibility would particularly be in whether or not a premises visit is necessary, and if so, who carries out the visit.

Pros	Cons
For Operator: Responses escalate whilst permitting flexibility so the Operator can choose which actions to take first. The responses required under Schedule 1 will now include sampling and testing issues. Operator is given time to become compliant by themselves if possible before regulatory intervention is required. Clearly places responsibility on the Operator to take corrective action whilst still having checks and balances to ensure that problems cannot continue for too long. For Regulator: More flexibility allows appropriate Response to be taken on a case by case basis. Costs minimised as Response Team visit not always necessary.	For Operator: For Regulator: May be less consistency in responses. MAF needs to manage this so that it can justify action / lack of action especially where sanctions are concerned and taking into account the need to protect the consumer.

2.3.3 Preferred Option for Responses to Non-compliances

MAF's preferred option is Option 4.

Refer to Appendix 1, 6.8.2 for current and proposed wording.

Appendix 1 Proposed Changes to Schedule 1 of Animal Products (National Microbiological Database Specifications) Notice 2011

Current Wording	Proposed Wording
6.8.2 Expected response to CPT non-compliance Responses to CPT non-compliance are according to non-compliance response number:	6.8.2 Expected response to CPT non-compliance All Responses: The NMD Controller must immediately notify the Operator and the MAF verifier each time the premises reach a new response level. The Operator must take appropriate corrective action. These actions must escalate with each increase in response level. The MAF verifier must confirm that the action taken is reasonable given the likely reasons for the non-compliance
1. Response one: The Operator will immediately notify MAF (NZFSA) VAFP of the non-compliance; a HCF or MWF. The Operator is required to commence corrective action as documented in their RMP including, but not limited to review of: • sanitation procedures. • GOP against Poultry Processing COP. • HACCP; with focus on *Campylobacter* control measures/interventions.	Corrective Actions expected at Response one: The Operator must review at least half of the following areas and correct any deficiencies found: • NMD sampling and despatch procedures. • cleaning and sanitation procedures. • good operating practices – should comply with relevant parts of the Poultry Processing COP. See http://www.foodsafety.govt.nz/elibrary/industry/processing-code-practice-poultry/index.htm • equipment design and set up. • *Campylobacter* control measures/interventions with particular focus on decontamination measures such as carcass washing and chemical decontamination. • compliance with Broiler Growing Biosecurity Manual. • any other areas likely to be contributing to the *Campylobacter* Responses.
2. Response two: The Operator will immediately notify MAF (NZFSA) VAFP of the non-compliance and continue corrective action as documented in RMP including, but not limited to: • Actions as per response (1). • Internal review of compliance with Broiler Growing Biosecurity Manual. • Equipment warrant of fitness checks by an independent expert.	Corrective Actions expected at Response two: The Operator must review the rest of the areas listed above and correct any deficiencies found.
3. Response three: The Operator will immediately notify MAF (NZFSA) VAFP of the non-compliance. As provided for in the Risk Management Programme, the Operator shall submit their current *Campylobacter* Management Plan to MAF (NZFSA) within two working days of detecting this non-compliance. The *Campylobacter* Management Plan must specify all measures that will be implemented to manage the risk from *Campylobacter* and target dates for implementation. The *Campylobacter* Management Plan is to include, but is not limited to: • Actions as per responses (1) and (2). • Any further sampling and research initiatives. • Introduction of a further intervention which must be capable of implementation without delay. • Some form of product disposition, considering internal and external capacity constraints; unless the Operator can show that a particular flock is free of *Campylobacter* in advance of processing.	Corrective Actions expected at Response three: The Operator must initiate investigations to identify further areas of improvement. This may involve asking independent experts to review actions taken to date and /or carrying out sampling and testing of areas of concern to determine where interventions are needed. The Operator must introduce at least one more intervention without delay.

Current Wording	Proposed Wording
4. Response four: The *Campylobacter* Response Team (CRT) will visit the premises. The CRT includes the following representatives: VAFP poultry expert, a CIG representative, a MAF (NZFSA) specialist with particular expertise in *Campylobacter* management and an industry nominated Technical expert/advisor. The CRT will consult/liaise with the following persons; an Operator's representative(s) with expertise in *Campylobacter* management, the NMD controller and the primary verifier at the premises. The scope of the CRT review will include, but is not limited to: • *Campylobacter* and other microbiological sampling results required by NMD and the corrective actions taken to date by the Operator. • Implementation of GOP requirements, including those specified in COP-Processing of Poultry. • Operator systems for ensuring control of on farm management practices, including the implementation of the requirements specified in the Broiler Growing Biosecurity Manual. • Robustness of the controls specified in the RMP, including any interventions, designed to minimise *Campylobacter* contamination of poultry. • Effectiveness of verification activities. • The CRT may recommend the application of sanctions as listed in response five immediately as an outcome of the visit. Compliance with the agreed Management Plan will be monitored by the VAFP verifier.	Response four: As soon as possible after response four is reached, MAF's *Campylobacter* expert will contact the Operator and review the actions taken to date, impact on results and further investigations under way. MAF's expert will then recommend on a case by case basis how MAF should respond. This may include one or more of the following, but is not limited to: • Maintaining a watching brief if actions to date look likely to result in compliance. • Requiring the Operator to take further corrective actions or to implement further interventions by defined dates. • Requiring the NMD Samplers and/or Controller to undertake training / refresher training. • Requiring one or more visits by MAF-nominated experts to the processing premises, broiler farms, NMD Controller's office, sampling area, laboratory etc to review any or all things relevant to *Campylobacter* Performance Targets. • Requiring visits as above by MAF verifiers and/or compliance officers. • Applying sanctions as described in Response five. MAF's *Campylobacter* expert must document the proposed response and get sign-off from a MAF Director before implementing the response. A copy of the signed document must be provided to the Operator and the MAF verifier.
5. Response five: The CRT will review and where necessary revise the agreed Management Plan from response four. MAF (NZFSA) expects the revision will require an escalation of response which may include, but is not limited to: • Revisit(s) by CRT and further recommendations by CRT. • Increased verification frequency by the VAFP. • Full-time supervision of processing by the VAFP. • Introduction of further interventions or some form of product disposition. • Further sampling and research initiatives. • Premises closure.	Response five: As soon as possible after response five is reached, MAF's *Campylobacter* expert will review progress to date against requirements and results achieved. Where appropriate to either protect the consumer or ensure that the premises becomes compliant MAF's *Campylobacter* expert will recommend the application of one or more of the following sanctions: • Revisit(s) by CRT and further recommendations by CRT. • Increased verification frequency by the VAFP. • Full-time supervision of processing by the VAFP. • Introduction of further interventions. • Requiring some form of product disposition (e.g. freezing, cooking). • Further sampling and research initiatives. • Premises closure. MAF's *Campylobacter* expert must document the proposed response and get sign-off from a MAF Director before implementing the response. A copy of the signed document must be provided to the Operator and the MAF verifier.