



# Evaluation of Template or Model Food Control Plan

## LONE STAR

2 March 2018





## Introduction

Section 40 of the Food Act 2014 provides that Ministry for Primary Industries' (MPI) chief executive can approve a template or model Food Control Plan (FCP) developed outside of MPI.

This allows food businesses or commercial operations to:

- Develop a FCP and have it approved so that each business using the plan does not need to submit their plan for individual evaluation.
- Make adjustments to the MPI templates to include multi-site or multi-business specific procedures or practices, or to reflect common language/terminology used in the business and have those changes approved.

## Context for this Evaluation

Lone Star restaurant chain has requested approval of their FCP under Section 40 of the Food Act 2014.

The Lone Star template FCP amends the MPI's Food Service and Food Retail FCP (March 2017 version) to include a proprietary process for preparing steak using a combination of sous vide and cook-chill processes.

Lone Star restaurants fall into the food service sector, so the MPI template is appropriate for them to use. Therefore this evaluation only assessed the Lone Star procedure for steak preparation.

## Evaluation conclusion (summary)

The Lone Star steak preparation process and procedure, if followed as written, is sufficient to adequately control the relevant food safety hazards.

Two recommendations have been made for Lone Star's consideration:

1. Clarify that the sous vide preparation step of checking that the vacuum-sealed pack has no creases or air pockets also applies to the steak preparation procedure, by incorporating this step into the procedure.
2. Modify the procedure to add a small temperature buffer into the procedure to mitigate the risk that temperatures will fall below 55°C rather than starting the immersion time again if it does.

The evaluator recommends that MPI's chief executive approves the Lone Star FCP as a template or model FCP under section 40 of the Food Act 2014.

The verifier of a registered food control plan based on the Lone Star FCP template is recognised under S.139 to verify template-based food control plans.





## Lone Star Steak Preparation Evaluation Report

<i>Ref: FR15 regs for custom plan evaluation</i>	<i>Evaluation criteria</i>	<i>Evaluation findings – Version Draft Appendix 1 – 12.1 – Lone Star FCP</i>
<b>10(3)(a)</b>	<b>Name of evaluator</b>	Chris Hewins
<b>10(3)(b)</b>	<b>Name of food business</b>	Lone Star
<b>10(3)(c)</b>	<b>Name of operator of food business</b>	Lone Star New Zealand
<b>10(3)(d)</b>	<b>Type of food to which the procedure applies</b>	Steak
<b>10(3)(e)</b>	<b>Description of practices and activities carried out</b>	<p>As this is a proprietary process the steps are described in this report in general terms. In the event that the Lone Star Food Control Plan (FCP) is approved by MPI's chief executive, MPI holds full details of the process on file in the event that a recognised verifier or Food Safety Officer needs to confirm that the process being used is consistent with the process as evaluated.</p> <p>Pre First Cook Preparing steak for sous vide cooking, followed by a heating step.</p> <p>First Cook a. Cooking using a sous vide technique. The time-temperature combination used differs from one of the combinations in the template sous vide procedure, but is not below 55°C (the minimum allowable temperature for sous vide cooking in the MPI template procedure). b. Rapid cooling vacuum-packed steak and storing in a chiller for up to 48 hours which is in accordance with good practice in the MPI template.</p>

Ref: FR15 regs for custom plan evaluation	Evaluation criteria	Evaluation findings – Version Draft Appendix 1 – 12.1 – Lone Star FCP
		<p>Completing Cooking A second sous vide step followed by removing steak from vacuum-pack, drying, and searing on high heat for desired colour.</p>
-	<p><b>List of documents assessed</b></p>	<p>Lone Star FCP template March 2017 MPI template modified by Lone Star June 2017 consisting of:</p> <ul style="list-style-type: none"> <li>• Template title page</li> <li>• Serve Safe contents - 1 page</li> <li>• Steak Preparation – 1 page</li> <li>• Steak preparation Monitoring Form – First Cook – 1 page</li> <li>• Cooling form – 1 page</li> <li>• Sous Vide Equipment Spatial Distribution Check – 1 page</li> <li>• Whole steak preparation flow diagram – 1 page</li> <li>• HACCP worksheet – 2 pages</li> <li>• Validation of critical control points – 2 pages</li> <li>• Completed Steak preparation Monitoring Form – First Cook – 1 page</li> <li>• Completed cooling form – 1 page</li> <li>• Completed Sous Vide Equipment Spatial Distribution Check – 1 page</li> <li>• Eurofins analytical report scotch beef shelf life validation Day 1 – 2 pages</li> <li>• Eurofins analytical report scotch beef shelf life validation Day 2 – 2 pages</li> <li>• Eurofins analytical report sirloin beef shelf life validation Day 1 – 2 pages</li> <li>• Eurofins analytical report sirloin beef shelf life validation Day 2 – 2 pages</li> <li>• Quick start operating instructions for Grant SV100 Stirred Water Immersion Thermostat for Sous Vide Cooking – 2 pages in English</li> </ul>



<i>Ref: FR15 regs for custom plan evaluation</i>	<i>Evaluation criteria</i>	<i>Evaluation findings – Version Draft Appendix 1 – 12.1 – Lone Star FCP</i>
		<ul style="list-style-type: none"> <li>MPI procedure ‘Cooking using the sous vide technique’ – 5 pages</li> </ul>
<b>10(3)(g)</b>	<b>The name and address of the place assessed on site</b>	N/A (Evaluation did not include an on-site assessment)
<b>10(3)(h)</b>	<b>Places exempted from on-site assessment</b>	N/A
<b>10(3)(i)</b>	<b>Technical experts who provided information used in the evaluation process</b>	Dr Roger Cook, MPI Lisa Olsen, MPI
<b>10(3)(j)</b>	<b>Copies of the technical expert’s reports</b>	N/A
<b>10(3)(k)</b>	<b>Information about the competency of the technical experts</b>	N/A
<b>10(3)(l)</b>	<b>Evaluator’s views and reasons on Reg 9(1)(a) requirements</b>	<b>(i) Identification of all hazards and other factors that are reasonably likely to occur or arise under S. 42(g):</b>

Ref: FR15 regs for custom plan evaluation	Evaluation criteria	Evaluation findings – Version Draft Appendix 1 – 12.1 – Lone Star FCP
		<p>A relevant control step was not identified in the HACCP worksheet: A check of each vacuum-packaging cut to make sure that there are no irregularities (air pockets, plastic wrinkles etc.) that could insulate meat surfaces against heat in the ‘Pre First Cook’ step.</p> <p><i>It is recommended that this step is included in the steak preparation procedure (to be consistent with the MPI template sous vide procedure), together with the corrective action to be taken in the event that air pockets etc. are found.</i></p> <p>The HACCP worksheet step for sous vide preparation identifies corrective action to be taken in the event that water bath temperature drops below 55°C during the time that product is immersed. The action is to re-start the immersion time. However, increasing the process time at temperatures that allow pathogen growth increases risk. This risk would be somewhat mitigated by setting a water bath temperature throughout the immersion period 3-5°C above the water bath temperature currently specified in the procedure. This would both mitigate the risk that the water bath temperature will drop below 55°C and, in the event that the water-bath did drop below 55°C, allow for continuing to complete the first cook in the specified immersion time, rather than re-starting the timer. This way, with the rapid chilling process that follows, there is a better chance that the cumulative sous vide and cooling process times will stay within accepted criteria.</p> <p><i>It is recommended that the relevant steps are modified.</i></p> <p><i>[At 15 March 2018 it is understood recommendations have been addressed and relevant steps taken.]</i></p>





Ref: FR15 regs for custom plan evaluation	Evaluation criteria	Evaluation findings – Version Draft Appendix 1 – 12.1 – Lone Star FCP
		<p><b>(ii) the validation information set out in the plan demonstrates as required by regulation 7(2) that—</b></p> <p><b>(a) the procedures and activities of the food business set out in the FCP will enable safe and suitable food to be traded:</b></p> <p>The pre-first cook heating step is a critical step in reducing surface bacterial load. There is further (unpublished) evidence from MPI work on the safety of rare burgers that this type of approach will inactivate surface pathogens.</p> <p>Adding product straight from the heating step to the sous vide water bath at for the specified time-temperature combination will continue to reduce surface load as the outer surface cools to the water bath temperature.</p> <p>The Lone Star validation information is at slight odds with the stated procedure for the water bath to be pre-heated to a temperature 5°C higher than the desired sous vide cook temperature. The first cook monitoring form identifies the water bath was set at the desired sous vide cook temperature when steaks were added. Adding steaks in the quantity used for validation raised the water bath temperature significantly.</p> <p>There was no indication from the Lone Star information as to how long it took for the water bath temperature to drop to the specified sous vide temperature measured at the end of the immersion time. One can assume that had the water bath been at 5°C higher at the start of the immersion process, it would have taken longer to reach the desired sous vide temperature.</p> <p>55°C is the MPI minimum recommended cook temperature for red meat under sous vide. If the water bath temperature were to drop below 55°C it starts overlapping with growth temperatures for pathogens, for example <i>Clostridium perfringens</i>. Extended time in a water</p>

Ref: FR15 regs for custom plan evaluation	Evaluation criteria	Evaluation findings – Version Draft Appendix 1 – 12.1 – Lone Star FCP
		<p>bath below 55°C would increase the number of <i>C. perfringens</i> vegetative cells and germinating spores.</p> <p>The Lone Star steak preparation procedure, if correctly followed, ensures that growth of <i>C. perfringens</i> will be limited even if the temperature drops below 55°C during the immersion time.</p> <p>The rapid chilling of product follows good practice. If applied as described in the procedure the combined time of the first cook and cooling should meet a conventional 2 hour (60°C to 21°C) /4 hour (21°C to 5°C) cooling profile.</p> <p>Shelf-life testing of product from the process supports the shelf life indicated in the procedure.</p> <p><b>(b) practices carried out will enable safe and suitable food to be traded:</b> Yes – see above</p> <p><b>(c) the facilities, equipment and essential services used in relation to those procedures, practices, and activities will enable safe and suitable food to be traded:</b> Yes - where they equate to those used for validating the process.</p>
10(3)(I)	Evaluator’s views and reasons on Reg 9(1)(b) requirements	<p><b>Is the information believed to be accurate?</b> Information is believed to be accurate.</p> <p><b>Any other information provided to the evaluator for assessment under 9(1)(a)?</b></p>
10(2)(a)	Statement of Validity	I state that the plan is valid in terms of s.41 of the Act (it is in writing and acceptable form)



Ref: FR15 regs for custom plan evaluation	Evaluation criteria	Evaluation findings – Version Draft Appendix 1 – 12.1 – Lone Star FCP
		I state that the plan is valid in terms of s42 of the Act (has all FCP Contents required by that section and FR15 reg 6).
10(2)(a)	Statement of Validity	The procedure is valid
10(2)(b)	What conditions does the evaluator recommend to be imposed on the registration of the plan?	No registration conditions are recommended
112-113 or 115-116	ISO requirements	N/A
11(2)(a)-(c)	Endorsement	I state that the Steak Preparation procedure is assessed by me as the Evaluator, I state that this evaluation report is as prepared by me as the Evaluator.
11(2)(a)-(c)	Signed and dated	<i>Chris Hewins 2 March 2018</i>