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Submission

To Food Standards Australia New Zealand

Proposal 1019 - Carbon Monoxide as a Processing Aid for Fish

Prepared by Seafood Importers Association of Australasia Inc.

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Part 1. The FSANZ Proposal and Background Document

The SIAA is unable to establish a position in relation to this issue due to deficiencies in the schedule, Proposal and background document. We strongly recommend that this be referred back to industry and the relevant government agencies for further consultation and research before proceeding, on the following grounds:

1.1 Insufficient time to respond

Although the schedule was published early in 2012, FSANZ has been running six months late on that schedule, leaving industry perplexed as to when this would progress. The call for submissions was announced on 17 December - just five working days before Christmas, with several weeks of the allocated submission time falling across the traditional holiday period. This made it extremely difficult for several small businesses to respond adequately because it is the busiest time of the year for many; and/or many were short-staffed due to holiday commitments. It also made it difficult to obtain research data as many staff from the relevant government agencies were not available due to holidays.

1.2 Technical complexity understated

FSANZ has understated the technical complexity of this issue in allocating the time for submissions.

1.3 FSANZ background document deficient and misleading

Despite the thrust of the background document (and FSANZ publicity) strongly implying that the use of CO to treat tuna is a potential food safety risk, the background document fails to provide any data supporting the reality of that assertion. In fact, data on histamine testing of tuna imported to Australia, and historical data on foodborne illnesses and hospitalizations published by Oz Food Net, show the actual risk to be low.

Another opening statement in the executive summary: *Agencies responsible for enforcing the Australia New Zealand Food Standards Code (the Code) have consistently regarded the treatment of fish with carbon monoxide gas to fish as not permitted by the Code*, is also misleading. In fact, most State Government agencies, and AQIS, have knowingly ignored the ambiguity in this part of the Code for the past decade (despite this being raised on many occasions) because they considered it low risk - allowing the trade to flourish. A working group comprising FSANZ, AQIS, NZFSA, NSWFA and SafeFood Queensland met to consider this issue and found, among other things:

1. Very few peer-reviewed technical papers on the issue, making commentary on international developments difficult;
2. Only one laboratory in Australia could perform analysis of foods for carbon monoxide, although validation work (at that time) was required before it could be used. The analytical method could not differentiate between traditional smoking, odourless smoke and carbon monoxide gas flushing treatments as each lead to the formation of carboxymyoglobin.

3. At that stage the working group did not recommend amendments to the Food Standards Code in relation to the use of carbon monoxide or odourless smoke.

These views by the agencies are a far cry from them consistently and unanimously regarding CO as not permitted, or that this Proposal is a simple request for clarification of the Code, as the background document suggests.

A further opening statement: *The treatment of fish with carbon monoxide gas is not permitted in the USA* is also extremely misleading as the USA does permit this under Generally Recognized As Safe (GRAS) provisions.

Astonishingly, the FSANZ background document provides a link to a USFDA paper on imported food protection (presumably to provide an example of a relative GRAS determination) that states*: FDA is aware of the concerns that the use of tasteless smoke **or CO**, one of its components, on tuna may prevent detection of potentially dangerous histamine formation in tuna. There is no scientific evidence that tasteless smoke **or CO** affects either the formation of histamine or the ability to detect histamine formation through sensory analysis*. It states further: *"Color change is not a reliable means of screening out decomposed from non-decomposed fish, or of screening out histamine-containing from non-histamine-containing fish. … The most effective means of detecting decomposed fish is by odor.* That report then sates HACCP principles are their required method for preventing the conditions that lead to histamine poisoning. **These statements directly contradict the main FSANZ assertions that CO's effect on color change is a threat to food safety assessment.**

FSANZ has also failed to provide any evidence beyond speculation that CO is used to deceive buyers - another main plank of the argument to alter the Code. Organisations such as ours, that monitor malpractice in the marketplace, confirm that this is not an issue of regular complaint by industry or consumers. That there is theoretical potential is poor grounds for altering the Code, considering the use of modified atmospheres, anti-oxidants and preservatives is common practice with hundreds of fresh and frozen food products including fruit, vegetables, meat and seafood (local and imported) to maintain the 'fresh' appearance of those products.

With no historical evidence linking CO treated fish to *abnormally high food borne illness; and evidence that the effect on color change is not detrimental to a correct sensory analysis (contrary to the proposal's assertion); and no evidence of actual consumer deception, this proposal appears to little substance, which concerns us. (**There is an intrinsic risk eating fish species in which histamines commonly form, under many circumstances, so that some incidents of poisoning always are likely*).

1.4 Bias in the background document

We note that FSANZ has largely avoided these direct assertions itself, and relied heavily on implied risk from overseas sources. The proposal states: *Internationally it has been of concern because of its ability to hide the age of fish and potential food safety issues associated with poorly handled tuna.* Historical evidence in Australia strongly suggests it is **not** a food safety risk; and **most** nations allow it - **including** the

USA, which argues that CO is not effective at masking histamine formation. That FSANZ should create a proposal on such insubstantial grounds is surprising to us.

We are also aware that one of the main drivers of this review is the frequency of complaints from a company that hopes to benefit from a proprietary solution to this issue using tasteless/odorless smoke for which it is claims an Australian monopoly.

Over the past decade, imported seafood has borne the brunt of a relentless campaign alleging poor food safety (particularly with products from Asia); and claiming competitive harm to Australian producers. A report commissioned by the Fisheries Research & Development Corporation in 2010 (Ruello & Associates) showed neither to be the case. However, the FSANZ background document contains references that might be construed as being written in a way that seeks to garner support for the proposal based on those negative perceptions of Asian imports and harm to local producers. For instance, the **only** reference to the source of CO treated fish states: *The use of carbon monoxide to treat fish is undertaken in some Asian countries.* The only other reference to the use of CO specifically excludes New Zealand. Yet CO is used in many nations outside of Asia, and a large proportion of fish imported to Australia in the categories likely to have been treated with CO comes from the Pacific region and Papua New Guinea. Further, FSANZ could not possibly be certain that CO is not used in Australia. What **is** certain is that modified atmosphere treatment of Australian and New Zealand fish is common, and those gas mixtures are very likely to include various levels of CO.

The extremely abbreviated cost benefit analysis in 3.2 relies heavily on an implied potential for consumer fraud for which there is no evidence at all; and the cost to importers in loss of business seems easily offset by "the benefits to those trading in untreated fish, including Australian-sourced, as a consequence of a level playing field". There is no evidence at all of an unfair playing field in reality; but there is considerable evidence that imported fish (treated and non-treated) competes as genuinely high quality products. The people who buy these products in the first instance are experienced end-users and retailers capable of expert assessment of quality and value on behalf of their customers.

The picture created in the background document is that poor quality (even dangerous) CO treated fish 'from Asia' is:

- competing unfairly with Australian producers;
- is deceiving consumers; and
- is a food safety risk.

None of the above is proven.

This is not simply a biased interpretation by SIAA. Subsequent media reports in The Australian newspaper, and Channel 7's Today Tonight, relying heavily on the background document for information, focused on exactly those implied (but unproven) issues.

Any Australian producer organization relying on the background document would certainly be influenced by the picture created and could easily believe the implied risks are based on actual evidence - and thus be misled into supporting the proposal without further consideration.

The SIAA is gravely concerned at what appears to be a politically driven (on behalf of a business hoping to better its position from a regulatory change) administrative review with a stated outcome before consultation; one that is almost entirely relying on implied risks and potential consumer deceit, for which there is no evidence; and fails to document substantial evidence to the contrary. We make no assertion that this is in fact what is behind the Proposal, but based on the information we have, we (and other observers) should be forgiven for being concerned. Certainly the press reports, based on the information in the background document, have seriously biased public opinion. The document itself has probably biased the opinions of many companies and individuals making submissions.

The perceived bias and lack of evidence in this review of the Code by FSANZ needs to be addressed.

Due to this, and the technical aspects covered in Part 2, we strongly recommend FSANZ delays the current process and engages in further research to establish some evidence around its assertions; and consultation with all the relevant parties.

Part 2. Technical and Commercial Issues To Be Properly Considered

2.1 This process is needed

Tuna, even in prime condition, changes color to brownish hues during the freezing process. This makes it less acceptable to consumers but has nothing to do with other quality attributes or food safety. Treatment to delay this color change is needed to ensure frozen tuna maintains it value. This has major implications for businesses throughout the distribution chain and especially in Australia where margins in the chain are highest. (The use of CO does not add color - for instance, brown tuna will not return to pink/red - but mitigates the onset of brownish hues during freezing.) Australia is highly reliant on frozen imported seafood with at least 72% of our supply currently imported by necessity (Ruello & Associates). This business is likely to grow significantly in future years and should be supported by good regulation. It should not be impeded by unnecessary or inappropriate regulation.

2.2 Imported tuna is not an abnormal food safety risk

Production standards for fish internationally traded, including fish imported to Australia, generally exceed Australia's domestic PPPS, resulting in a high standard of products with very few food safety incidents recorded. This is particularly so with high value products such as tuna. In addition, there is mandatory testing of seafood

at our border. Risk products, including fish commonly associated with histamine, are tested at the rate of 100% until a good compliance history is established.

AQIS records show that histamine detection in imported fish is extremely low. Between 2005 and 2011 there were 4,710 AQIS tests for histamine in seafood with a failure rate of 2.3%. Of the 108 failures 70% were dried products. (Source - AQIS).

Oz Food Net compiles data from Australian and State government agencies on food borne illnesses and hospitalizations, which is published in annual reports. In the five years from 2006 and 2010 inclusive, there were 8 incidents of histamine poisoning associated with tuna, affecting 23 people, with 8 hospitalizations. Oz Food Net did not differentiate between CO treated or untreated tuna, and the total includes local and imported products. (Source - Oz Food Net). This was a fraction of the total illnesses associated with seafood - the major cause being ciguatera poisoning.

2.3 No consumer deception

Consumers place a great deal of reliance on retailers and specialist fish restaurants for information about seafood due to the complexity of choice, handling and use. (This is why most fish is still sold through specialist fishmongers despite the proliferation of supermarkets). The reputation of these businesses is the main attribute of their success. It would be extremely difficult for end-users or retailers to routinely pass off poor (or dangerous) quality fish as fresh, based on color alone; and it would certainly attract complaints. Industry associations such as SIAA, and the Master Fish Merchants Association, monitor areas of complaint in order to address major issues in our industry. Consumer deception linked to water retention additives, and to a far lesser extent, fish substitution, has been a major problem and we have engaged with the appropriate government agencies to seek remedies. Neither organization has any history of complaints based on the color of tuna. Whilst it may be considered logical or intuitive speculation on the part of regulators (or media) that this occurs, in reality it is so rare that we are not aware of any such complaints. To base a change to the Code on the potential for consumer deception, where there is no evidence that such deception actually occurs, seems unwarranted - particularly when the use of modified atmospheres, antioxidants and preservatives to maintain a fresh appearance is so common throughout food production.

It should also be noted that the nations mentioned in the background document as prohibiting CO treatment, ostensibly on the grounds of potential risk, are highly trade-protected markets for seafood. Non-tariff trade barriers proliferate in these markets under the guise of food safety. Relying on the guidance of those nations at face value, without evidence of actual risk in either their environment or ours is questioned by us.

2.4 Australian producers using MAP

Modified Atmosphere Packaging is one of the biggest innovations in seafood packaging and marketing in Australia in the past decade. There is a proliferation of gas mixtures in use and being experimented with, and these include varying proportions of CO (up to relatively high percentages). Until more is known about the

risks and benefits of this innovation, excluding fish from the clause that currently allows CO as a processing aid may have unforeseen technical and regulatory implications across a range of products and industry sectors. Certainly, the suggested change would go well beyond the intention of preventing color fixing in tuna.

Support for this change by Australian producers and processors could be based on a high degree of ignorance of the subject. CO treatment is not exclusive to tuna but can also used to preserve the appearance of many other fish species. A large proportion of Australian fish is exported. Whilst Japan has traditionally been our biggest market, China (which unofficially tolerates CO treated fish) has recently inherited that position. In the future, Australian seafood producers may find themselves at a significant disadvantage in competing with nations that allow the CO treatment of fish exports, in markets that permit imports of CO treated fish. During research for this submission, we were also made aware that some Australian producers are currently investigating the use of CO (or gas mixtures containing CO) to enhance the appearance of local fish for our domestic market. Clearly, it is too early in the development of this significant innovation to make such a limiting change to the Code (given the absence of a food safety imperative).

2.5 Technical complications for regulators and laboratories

Given that proprietary tasteless/odorless smoke gas combinations have been flagged as a solution to this issue, and that MAP combinations with CO are prolific, regulators and analytical laboratories will be faced with the impossible task of assessing gas combinations to differentiate between acceptable curing processes and the illegal use of CO as a processing aid. Whilst analytical laboratories are capable of detecting CO in the flesh of fish, this capability may be useless in the subsequent assessment of what is, and what is not, a legal combination or use.

2.6 Reliance on HACCP a better approach

CO cannot restore the bright red color of tuna after the change to brownish hues has occurred due to deterioration (or freezing). The process is only useful on fish that is in prime condition. This is not widely known in this debate, and removes one of the elements of food safety concern. Imported fish is again tested at our border. The final part of the safe journey of the fish relies on HACCP principles extending throughout the distribution chain. It is established (by the USFDA report in the FSANZ background document) that color change is a poor determinant of deterioration or histamine levels – and this is especially so for unskilled people such as consumers. Therefore, it seems a much safer approach for regulators to emphasis the importance of HACCP in regard to fish commonly associated with histamine, than to rely on the prohibition of CO which may well be interpreted as a total solution to quality issues with histamine producing fish. This is the approach taken by the USFDA.

2.7 Labeling

Mandatory labeling could provide additional protection by advising retailers and food service end-users of the use of CO and appropriate shelf life. Violation of the Use-by Date would be a food safety breach.

If the intention is to exercise the 'consumer's right to know' principle, then this could be achieved to a large extent by mandatory labeling in retail environments. (However, if the consumer has no experience in sensory analysis by color, or of the benign effect of CO other than in color fixing, it could be argued that such information would be as misleading as it would be useful). A more reliable system is the reliance placed on the retailer to present safe food.

Conclusion

The SIAA recommends that FSANZ delay the current process to:

1. provide additional research to support its assertion of potential food safety risk and consumer deception; and
2. engages face to face with interested parties, including industry and State Food Authorities, to discuss and resolve the issues raised in this submission.