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**From:** [REDACTED]  
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**Attachments:** Mango DHB formal complaint.doc

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Part 1 of our submission was emailed through yesterday with an attached PDF doc.

This submission will examine a number of serious problems with the application. Also attached is a copy of our formal complaint relating to a clear breach of the A NZ Food Standards Code, dated 10-3-06. The issues and problems detailed are clearly long standing, and in our view such breaches are blatant being both ignored and tolerated by regulators. Also please note that the contact phone numbers at the end of the PDF letter are out of date, and our correct contact details will be provided at the end of this submission.

Firstly there is the problem of the scope of the application. The earlier Application A1092 sought and gained approval for the Irradiation of Specific Fruits and Vegetables.

This was in accordance with the existing Standard A17 Food Irradiation, which provides for applications to be made for specific food items. This is to allow proper consideration of the effects of the irradiation on the specific foods and the impact of these. However the current A1193 seeks to gain approval to irradiate ALL fresh fruit and vegetables.

In the past, some proponents of food irradiation of food items have endeavoured to dismiss the impact of vitamin depletion, formulation of radiolytic products and free radicals within the food as not of significance on the basis that an individual food product is only a minor component of a persons whole diet. Such does not apply to the "all fresh fruit and vegetables" which is the subject of A1193. The application does note that some commodities which are classified as fresh fruits and vegetables, such as avocado, bananas, pineapples and root vegetables including potatoes "are not likely to be, or would rarely be, irradiated under the requested permission". The impact and effects of irradiation on these foods has not been included or examined in A1193.

The reality is that ALL MEANS ALL!

We submit that Application A1193 is seriously, perhaps fatally flawed, in that contrary to correct statutory and regulatory approach, this application seeks regulatory inclusion to irradiate ALL fresh fruit and vegetables and only vaguely refers to some of those to which they may or may not apply. Rather, the necessary and correct statutory and regulatory approach would be to only specify those products to which the regulations applied. The applicant has failed to do so.

In some ways, this application is perhaps only a step away from a possible following application to amend Standard 1.5.3 to include irradiation of all foods - possibly noting that really they would not apply it for some of them!

Further to the problems with the wide scope, we will provide some details later in this submission on what we see as undeclared wider agendas behind this application.

Secondly there are a number of serious errors, omissions and false claims made in the application, especially with regard to misrepresentation of the NZ situation. As early as 1973 (and revised 1984) NZ had Food Regulations that prohibited the sale of any food that was treated by ionizing radiation, unless the Minister of Health had approved the treatment. Early in 1985 permission was given for the irradiation to decontaminate about 1 tonne of herbs. However in 1986 media here revealed that a batch of chives used in cottage cheese had been irradiated in NZ without permission. The products were recalled.

In

1987 the A & NZ Association for the Advancement of Science Conference at Massey Uni had a topic session on Food Irradiation, for which I co-authored a paper. The late 80's has been described as a period of intense public debate about the safety of food irradiation. The NZ Government set up a "Working Party on Irradiation Issues and Food Irradiation in New Zealand". I was a member, having been invited by the Ministry for the Environment.

Subsequently in December 1998, the NZ Government Policy on irradiated food and industrial radiation policy in NZ was released. It instituted a ban/moratorium on the irradiation processing of food for human consumption in NZ, which included the importation of such foods into NZ. Also it included "If at some time in the future the Govt permits the commercial irradiation of food in NZ a full set of controls on the food irradiation process will be necessary before any permits are issued (2.3) and that "Controls (including full labelling requirements will undergo public scrutiny and general publicity before they are implemented" (2.4). Please see our Part 1 PDF of our submission - "The farce of the labelling of irradiated foods in NZ".

Thus NZ became the first country in the world to ban food irradiation. This situation lasted until CER with Australia led to what was termed 'harmonisation' of our food regs. Certainly the first syllable of that term rang true! Effectively NZ lost its sovereignty over our food regs. The decision-making via ANZFA was to be decided by a body/board that was made up of one representative for each OZ State and each Federal Territory, and NZ had only one vote/rep. The Voting policy of the UN of "one country, one vote" was not instituted.

In 1999 the ANZFA (the forerunner of FSANZ) approved Standard A17 Food Irradiation. Essentially this overturned the earlier ban, and allowed for applications to be made, but each only for specific food items - not for wider/generic ranges of foods.

Turning to the application, we have noted in the PDF with our Part 1, that there has been a partnering of the applicant, QLD DAF, with Marto's Mangoes - one of the major exporter of irradiated mangoes into NZ. Colour samples of their sticker "labels" were provided in that PDF, showing that Marto's deceptive labelling techniques are the worst that we have ever encountered. They are clearly and cleverly designed to NOT alert the consumer to the fact that Marto's mangoes have been irradiated. This deprives consumers of being able to make an informed choice - yet the applicant repeatedly proffers this as being fundamental and adequate in their application. Eg - in 2.6.4, headed 'Increased Consumer Choice' - "Existing labelling provisions will assist with making this choice". Our submission is that the existing labelling provisions are both a farce and totally inadequate. In that regard we do submit that Standard 1.5.3 is not fit-for-purpose regarding labelling.

The existing situation is untenable and we will be pursuing all legal options available through the NZ Fair Trading Act.

Also it is revealed that the application was prepared by two OZ scientists and an outfit called Radiation Advisory Services from NZ. The individual name is redacted. We can reveal that the person behind Radiation Advisory Services is Dr Peter Roberts, formerly a nuclear scientist from the NZ DSIR Institute of Nuclear Sciences. He was also a member, along with myself, of the earlier mentioned NZ Working Party too.

Though based in NZ, Radiation Advisory Services is not listed on the NZ Companies web site, either as a company, incorporated society or as a trust/charity. It appears not to be a legally incorporated entity, which we find puzzling. But we do know more about Dr Peter Roberts.

The International Atomic Energy Agency (IAEA) is the main backer of the ICGFI - International Consultative Group on Food Irradiation. The priority for ICGFI is to encourage trade in irradiated foods by working towards regulations that are as consistent as possible in different countries. Essentially they aim to remove all barriers that may serve to limit the international trade in irradiated foods.

FoE(NZ) was much earlier given a leaked draft of an ICGFI doc that resulted from a conference - which produced a doc titled {from memory}, "Guidelines for the International Acceptance of Irradiated Foods". I recall being stunned at the sophisticated strategy that included specific techniques to target producers, industries, officials, regulators, consumer groups, Members of Governments, media etc- in order to clear the way for essentially unrestrained trade in irradiated foods.

Dr Roberts was invited to attend that conference, representing NZ.

When I spoke with him after this, he told me that he had expected the attendees to be mainly scientists from around the world, but he was surprised that the bulk of people there were not scientists, but communications and marketing specialists in overcoming resistance and gaining the acceptance of technologies that posed challenges to implement. These Guidelines were published as an IAEA Tec Doc, but with our recent computer hassles, I cannot include it with this submission. I will try to get a copy to FSANZ as soon as I can with the hope that you will still include it in your considerations of A1193.

Subsequently, Dr Roberts went on to become, effective in 1995, the elected Chairman of ICGFI. Thus the NZ scientist who helped prepare this application has for a long time been on the IAEA payroll - and possibly still is. Our concern is that the thrust of this A1193 application is very much in line with the ICGFI agenda and goal. Suspensions in this regard are reinforced by the misrepresentations and lies in the application, all of which are somewhat self serving for the applicant.

Above I have summarised the NZ irradiation developments that were left out of A1193. Dr Roberts knows these as well - possibly better than I, yet he did not include them.

On p58 there is a quote from a reference by Roberts and Heron that "There is no obvious example worldwide where a product has been withdrawn from a market because it has been irradiated". That is untrue.

Products with the illegally irradiated chives were withdrawn here in NZ, the Orijen irradiated cat foods in OZ were withdrawn and the Govt there subsequently went on to make the irradiation of cat foods illegal. Way back there were shrimp/prawns withdrawn in Britain because they were irradiated in Holland after first being declared unfit for human consumption. The term "Dutching" was coined to describe irradiation attempts to commit food fraud. This would all be known to Dr Roberts. These are just a few examples of recalls.

The claim is also made in A1193 that "There has been no negative reaction to 15 years of irradiated sales of mangoes in NZ". Again this is untrue. One only has to Google "irradiated mangoes nz herald" to find articles such as "Zapped mangoes break out in blotches", "Australian Irradiated fruit found unmarked in stores", "How do you know fresh mango is irradiated?" etc. Please refer also to our Part 1 where it is clarified that many NZ consumers were deceived into buying mangoes that they did not know were irradiated due to cunning labelling trickery.

One of the causes of lenticel discolouration in mangoes is listed in the Mango Quality Assessment Manual on the post-harvest quality of Australian mangoes as - "Damage from irradiation used for insect disinfestation". (AIMA, 2009).

This brings me to describe what gamma irradiation actually does.

The reason that it is called ionizing radiation is that the gamma rays have sufficient energy to actually disrupt/break previously stable molecular bonds, creating ions in the process. Being a relatively large molecule, DNA is readily damaged by this process. That is how it performs its intended purpose to render insect larvae etc non viable.

However the dose of irradiation needed to actually kill the pests would also damage the cell structure of the food, as well as causing organoleptic effects - many of which detract from the appeal of the foods. Dr Roberts has published his early experiments with trials of irradiating NZ lamb in the small gamma plant in NZ. The fat in the meat got oxidized and resulted in a smell that has been described as similar to a "wet dog smell". Attempts to lessen this involved submerging the lamb in ice-cube chilled water during irradiation, but the offensive smell was still produced.

Proponents of irradiation push the spin that it damages the pests but not the food. This is false. It is similar to advocating that when the domestic electric light - a more benign form of radiation, is turned on in a room, that one can nominate selected objects(targets) in that room and only they will receive the light. Of course this is nonsense - the radiation reaches everything. The crucial difference is that the visual light only reaches the surface and, not being ionizing, does not penetrate the objects and thus create unstable ions/free radicals and radiolytic products.

The application totally fails to mention the unique saga in OZ with the irradiated Orijen cat food. This was a smoking gun for the harm of irradiation if ever there was one - probably precisely why it was not mentioned in the application. This gourmet cat food was produced in Canada in large batches for international sale. The OZ Quarantine thought that due to its low temperature processing that it may introduce an unwanted poultry disease, so they required it to be irradiated before it could be sold in OZ.

The irradiated Orijen cat food produced severe nervous system damage in cats in OZ, whereas the identical non-irradiated product caused no such damage when fed to cats in other countries. Champion Petfoods, Orijen's manufacture, recalled their product in OZ, and in 2009 irradiation of cat food was banned in OZ. Dr Roberts knew about this too, but again all reference and details of this sad but telling release of damaging free radicals in the cats bodies was left out/censored from application A1193.

We did appreciate the disclosure in 3.2.2.4 re the FDA report on the Jerky pet treats. This was something that we were unaware of, and it has been disturbing to find that such products are widely available and sold through major supermarkets in NZ - without any media or public awareness of the problems of their toxicity and damage to dogs around the world.

The VitaPet brand here is mostly typically fine-print labelled as being irradiated, but one tell tale clue is the warning "Not to be fed to cats". Another public awareness campaign is warming up here.

Irradiation is not shaping up to be a good brand. Surely there is something weird and wrong that the OZ Govt can come out and legally ban the irradiation of foods for cats, but still allow it for dogs, other pets and humans!

We would like to also put it on record that for some unknown reason, even though we have long been subscribers to the FSANZ Notifications, we did not receive the Notification about A1193 that was apparently sent out a few months back. I have spoken with Joanna Richards about this.

She was quite helpful but even she could not explain what had happened or confirm that we were even sent such notification. Certainly we did not un-subscribe ourselves. We did appreciate the slight extension provided, but the timing has resulted in a very compromised submission.

We hope that you will still accept some supplementary docs as part of our submission which we hope to forward as soon as we can secure them.

In conclusion, we wish to endorse and support the excellent submission from Geneethics, Robin Taubenfelt et al, and we also submit that for all the reasons set out above, that Application A1193 be declined, and further that the issues that we have detailed re labelling cause you to suspend the approval of all irradiated foods into NZ until the crucial labelling issues are remedied - so as to provide for proper consumer informed choice as is stipulated in the relevant Standards.

[REDACTED]