[redacted]

From: [redacted]
Sent: 23 August 2014 09:02
To: [redacted] (Defra)
Subject: Re: Report - Toxicity of Tungsten and Tungsten-Alloy Shot

Categories: Lead FOI - Sent to Me

Dear [redacted]

Quickly before signing off…! I shall certainly look at it again when I get home. I suspect that the science behind the assumed safety of the current alternatives to lead will be raised and LAG will have to take such questioning into consideration. I also suspect that questions will be raised about more than W. But we can deal with those questions as they arise.

Perhaps a naive question … but potential hazards in products going onto the market should be covered by the REACH processes and risk assessments done by trade prior to authorisation. If there is a risk attaching to Ni and Co in some tungsten shot types then surely it will have been (or should) be covered by the relevant REACH risk assessments? The same would apply to possible contamination of some steel shot with Ni and Co. Is that not the mechanism for public and environmental protection? I could take that up with the trade rep when I get home - but in the meantime could you take a view please from your REACH specialists?

Hence LAG's awareness raising of alternatives' use might be made on the basis that said alternatives have been through the REACH scrutiny and passed as safe?

The American protocols to be met for the safety of alternative shot types for shooting wildfowl raise some tricky issues for Europe (not least trades in ammunition). They relate solely to wildfowl on the assumption that using lead for wildfowl has been banned. If the protocols were applied to lead per se in a wider context I have no doubt that lead would fall at the first level.

Hope these points make sense - and thanks again.

Pity about your weather …!

All best

[redacted]

On 21 Aug 2014, at 15:21, [redacted] (Defra) [redacted] wrote:

[redacted]

Thanks for your reply. I'll keep this brief as you're enjoying your holiday (somewhere hot I hope! – it's been dreary and a bit chilly here, the perfect weather to go camping on Snowdonia as I am this weekend ☹).

Your response confirms the uncertainty I felt about circulating this more widely. I agree that the evidence base is rather difficult to unpick; most of the paper went over my head in honesty. I'm not aware that Defra has any plans at the moment to look in to this issue further – but I can follow that up with [redacted]

Your approach regarding sharing this paper with the wider LAG is logical and of course your decision to make. Though, I had thought that now the risk assessments were complete the group had come to a general understanding of the risks posed by lead? My understanding is that the group's focus is now on mitigation of those risks, which might include raising awareness of alternative ammunition types and encouraging their use, in which case I'd assumed this paper might be useful. However, I take your point that concerns with tungsten shot would require greater scrutiny than just this one report (I hope we don't end up having to set up a Tungsten Ammunition Group!).

Of course, I am not a member of the LAG and also I have missed a number of recent meetings, so my understanding of the extent of consensus regarding the risks posed by lead within the group is likely to be rather shallow to say the least.

I'll let you know about any further outcomes following the seminar.
Please don't feel obliged to respond to this email - enjoy the rest of your holiday in peace!

All the best
[redacted]

From: [redacted]
Sent: 21 August 2014 10:49
To: [redacted] (Defra)
Subject: Re: Report - Toxicity of Tungsten and Tungsten-Alloy Shot

Dear [redacted]

Many thanks. I was aware of this meeting - and had been aware of the muddle over W and W alloy shotgun cartridges especially in Denmark. We looked at this some years back.

The evidential base is not the most straight forward but to me it seems convincing - that pure W and W matrix cartridges are OK. And the risk from Ni containing alloys is confined to the effects of embedded shot in wounded animals. But how seriously that should be taken is another matter. The priority is to reduce wounding and retrieve wounded animals as quickly as possible. Worrying about remote carcinogenic effects on the animals you have wounded seems strange to me.

Having said that I am aware that the [redacted] has been making an issue over the need to check the science behind the alternatives to lead (in case they are just as toxic etc). But that is easily seen for what it is as it goes without saying that <u>if</u> lead has to go, any replacements should not be "just as toxic". And that consideration applies right now in connection with the alternatives used following the 1999 wetland regulations. But that is not part of LAG's remit?

It strikes me as bizarre to speculate on standards that alternatives might have to pass before there are standards agreed (decision taken) for the material to be replaced? The standards for lead's replacements to pass should be applied to lead in the first instance. Presumably, the idea for a directive on the standards for lead shot replacements has in mind that EU might soon be minded to regulate on lead ammunition (perhaps only for waterfowl and wetlands?).

I assume that Defra will not be minded to do anything regards the lead replacements already in pretty widespread use in UK? And my view is that circulation is not required for LAG purposes just now, but that it could become relevant in due course.

Hence "IF/WHEN the toxicity of lead ammunition alternatives becomes relevant to LAG it will almost certainly be covered as a factor to be taken into consideration before advising on possible mitigation measures".

Best regards and thanks again - I'm on holiday at the moment and apologies if this is a bit muddled - but will be picking up emails until Saturday.

Please let me know if anything else emerges from the Defra tungsten meeting.

Kind regards as ever - hope helpful.

[redacted]

On 20 Aug 2014, at 21:03, [redacted] (Defra) [redacted] wrote:

<<20140819 Presentation - TUNGSTEN & TUNGSTEN ALLOYS - Prof Vernon Thomas.pptx>> <<20140819 Report - Tungsten & Tungsten Alloys in Ammo - Prof Vernon Thomas.pdf>>

Dear [redacted]

I am forwarding the attached report and accompanying presentation to you because I believe it may be of interest to you and the other LAG members. However as Defra does not sit on the LAG I am submitting them to you to consider further circulation.The report looks at the toxicological effects of tungsten and the tungsten alloys used in producing types of non-lead based ammunition type, and points to empirical evidence that it is the non-tungsten metals (nickel, cobalt, chromium and zinc) used in producing such ammunition types which pose a risk, including potential carcinogenic effects.

I received these documents from [redacted], a colleague who works in Defra's Pesticides and Chemicals Policy Team(specifically, he looks at the effects of hormones and certain metals in the environment). Yesterday, he hosted a seminar where this presentation was given by the author of the report, Dr Vernon Thomas, Associate Professor Emeritus at the University of Guelph, Ontario, Canada. I was due to attend but unfortunately I was required to stay in Bristol for personal reasons. However, I believe [redacted] from the FSA attended.

You may well be familiar with [redacted] and Dr Thomas. [redacted] tells me that they have collaborated on previous projects looking at this issue in 2007 and 2009, including the paper referenced below (click for link to the abstract).

Thomas, V.G., Roberts, M.J. and P.T.C. Harrison. 2009. Assessment of the environmental toxicity and carcinogenicity of tungsten-based shot. Ecotoxicology and Environmental Safety 72: 1031-1037.

Please note that [redacted] (and, by extension, Defra) was not involved in the commission or production of the attached report (the text on the first page refers, presumably, to when [redacted] first received the paper from Dr Thomas). I understand the report was produced in response to the recent ban on tungsten shot in Denmark.

I hope these documents are of interest.

Best wishes,

[redacted]

[redacted]

[redacted] | Defra | [redacted]

Department for Environment, Food and Rural Affairs (Defra)

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