Department of Conservation
Te Papa Atawhai

OIA 19-E-0200 /docCM 5900818

1 May 2019

[redacted]

Thank you for your Official Information Act request to the Department of Conservation, dated 30 March 2019.

You have asked a number of questions about the Department's procedures for taking samples for testing, and laboratory testing methods for 1080 residues. These questions are similar to previous OIA requests: 18-E-1056; 18-E-0976; 19-E-0123; 19-E-0153. Our responses to these are either published on the fyi website, or on the Department website, available here: www.doc.govt.nz/news/oia-responses/.

In responding to a request for official information an agency is not obliged to provide information that has already been made publicly available. As we have previously advised, the Department does not operate a toxicology laboratory and we rely on externally accredited laboratories to recommend the protocols for taking samples and devising test methods for pesticide residues: www.landcareresearch.co.nz/resources/laboratories/toxicology-laboratory/services/advice-and-protocols/protocol-for-tissue-sampling-and-testing-for-vertebrate-pesticides-in-animals.

We interpret your questions as suggesting the Department is purposely sending inappropriate samples to Landcare Research *Manaaki Whenua* Toxicology Laboratory for 1080 residue testing. This could support a view that the Department is misrepresenting the effects of 1080 on native species.

To the contrary, we emphasize that we have no evidence that 1080 causes detrimental effects on threatened native animal populations. Indeed, our evidence shows the opposite is the case, as in the examples of scientific research reported below:

Landscape-scale applications of 1080 pesticide benefit North Island brown kiwi (Apteryx mantelli) and New Zealand fantail (Rhipidura fuliginosa) in Tongariro Forest, New Zealand

www.doc.govt.nz/globalassets/documents/conservation/threats-and-impacts/pest-control/landscape-scale-applications-1080-benefit-ni-kiwi-hugh-robertson.pdf

Effects of the aerial application of 1080 to control pest mammals on kea reproductive success

https://newzealandecology.org/nzje/3341

We further advise that, whether sampling blood, bone, tissue or stomach contents, the results of residue testing cannot prove cause of death. Any measurable pesticide found in a dead animal can only indicate exposure. The concentration found in the sample has no relation to the lethal dose of the pesticide for that species, and any interpretation of results must take into account a range of other biological factors.

We have sought to answer your previous questions as helpfully as we can, and while we appreciate you may think our scientific advice is incorrect, we respectfully suggest that Official Information Act requests are not the appropriate avenue for engaging in scientific debate.

Accordingly, beyond this response we do not propose to engage in any further comment or debate on matters that are not relevant to official information held by the Department.

We will of course continue to respond to any legitimate request you make for official information and will assist you with that in accordance with the Act.

Your questions and our responses are listed below:

> *1. As DOC was the co-applicant for the review and reassessment of the 2007 ERMA review, can you please provide the 1987 and 1989 papers for the 1080 test methods DOC chooses to use, accredited by IANZ and LAS.*

We emphasise that the Environmental Risk Management Authority made it's 2007 decision on the re-assessment of 1080 independently of the Department of Conservation. Furthermore, the Department does not "choose" the testing methods used by accredited toxicology laboratories.

There were 68 pages of references provided by applicants for the 2007 ERMA review. The reference list is publicly available on the Environmental Protection Authority website www.epa.govt.nz/assets/FileAPI/hsno-ar/HRE05002/HRE05002-034.pdf.

We asked your advice about which of the 1987/89 papers you want us to provide, via the fyi website. You have not responded to our request, however, if the papers are held by the Department, we would be pleased to forward them to you.

2. Please confirm if these testing methods are accurate when samples are not tested with urgency and are stored and/or frozen.

The Department does not hold this information. We understand there is no one best method, but a variety of protocols for sample storage, depending on the type of sample and testing method. We contact Landcare Research *Manaaki Whenua* Toxicology Laboratory for advice, if their published protocols do not already cover the particulars of obtaining samples.

2. a. Is there any mention of low recoveries under certain conditions and is 1080 adsorption to different materials referred to in any way?

This is not information held by the Department, therefore your request is refused under section 18 (e) of the OIA.

3. The link to Landcare's sampling protocols you provided for testing unmetabolised or detectable residues of 1080 says "Muscle is the best tissue to take, along with Stomach contents." But you specifically stated in a previous response "The protocol for 1080 advises that muscle is the best tissue to take." What peer-reviewed research can you back this up with?

That statement about muscle tissue was in response to your question (in OIA 18-E-1056) "why do you not ask for bone samples to be tested…?" Our response was "The Department follows the protocols set down by the Landcare Research *Manaaki Whenua* Toxicology Laboratory regarding what samples to take for different pesticide residues […] The protocol for 1080 advises that muscle is the best tissue to take… "

Any peer-reviewed research about sampling held by the Department has already been made publicly available. We do not hold any other official information on this matter, therefore your request is refused under section 18 (d) of the OIA.

4. What comparative studies has Landcare provided DOC for you to have a preference to provide muscle samples for testing residues of 1080 over other tissue types?

Landcare has not provided the Department with any comparative studies. We do not have a preference for muscle samples. I am therefore refusing your request under section 18 (e) of the OIA as the information does not exist.

5. a. Are you aware of your own commissioned study that confirms muscle samples had the lowest concentration of 1080?

Environmental Impact and Post-Control Assessment on Rangitoto Island, after Possum and Wallaby Control.

"Possum stomachs contained the highest concentrations of 1080."
"Significant concentrations were present in the livers of dead animals."

Day 1
Concentration of 1080 ug/g

Stomach 9.1
Liver 1.5
Leg Muscle 0.5

Stomach 26.4
Liver 6.6
Leg Muscle 1.5

Stomach 18.1
Liver 3.7
Leg Muscle 0.9

Day 13
Concentration of 1080 ug/g

Stomach 13.3
Liver 1.8
Leg Muscle 2.3

Stomach 5.4
Liver 8.4
Leg Muscle 0.3

Stomach 2.0
Kidney 1.5
Leg Muscle 0.2

5. b. When looking at the above results, what sample type would be the best to provide for testing residues of 1080?

5. a. Yes, we are aware of the contents of the study you cite and have released the full report with our answer.
One of the objectives of this research was to provide information about the persistence of 1080 in the target marsupial species. We note that the concentrations were specific to those target species, and should not be extrapolated to all fauna, in all situations. This report concluded that high concentrations of 1080 in possum stomachs are to be expected shortly after a control operation, but the risk from 1080 baits to non-target species, humans, and pets was minimal after 1 month.

5.b. As you have already stated in question 3, the Landcare Research *Manaaki Whenua* Toxicology Laboratory website advises:

"Sodium monofluoroacetate is a very water soluble compound and rapidly passes through the body. It is at its highest concentration in blood and stomach contents soon after poisoning. After death, muscle is the best tissue to take, along with stomach contents. The liver and kidneys do not normally retain large amounts of 1080, so are therefore not appropriate tissues to sample."

www.landcareresearch.co.nz/resources/laboratories/toxicology-laboratory/services/advice-and-protocols/protocol-for-tissue-sampling-and-testing-for-vertebrate-pesticides-in-animals

Please be aware that samples taken in the field will not conform to laboratory ideals. The type of sample taken will depend on many factors, including the species, whether the animal is dead or alive, amount of time since death, and environmental circumstances. For example, stomach contents may not be available for sampling due to scavenging, or the state of decay of the carcass.

6. From the tissue samples DOC has forwarded for evidence of 1080 residues what percentage have been samples from stomach contents, liver, stomach, kidney, heart and muscle.

Percentages for vertebrate tissue samples for 1080 from the Vertebrate Pesticide Residue Database are tabled below.

89% of the samples for 1080 testing were categorised as either stomach contents (included are intestinal, gut contents, vomit, faeces, and guano) liver, stomach, or muscle. There were no kidney or heart samples recorded. Other categories included eggs, skin, whole body, bone.

Sample types	% of all vertebrate tests, including birds	% of bird samples (native & introduced)
stomach contents	6.2	4.5
liver	3.0	0.3
stomach	9.0	0
muscle	70.8	34.4
other	11.0	4.2

7. What percentages specifically relate to bird samples?

Percentages are supplied above.

8. Please provide comparative test results from the Vertebrate Pesticide Residue database you maintain that show different sample types have been

taken from the same animal. Please include the Toxicology Report numbers for reference.

The database does not record comparative test results. I am therefore refusing your request under section 18 (e) of the OIA as the information does not exist.

You are entitled to seek an investigation and review of my decision by writing to an Ombudsman as provided by section 28 (3) of the Official Information Act.

Please note that this letter (with your personal details removed) will be published on the Department's website.

Yours sincerely

[redacted]

Amber Bill
Director Threats, Biodiversity
for Director-General