

MacMillan, Janet

From: [redacted]
Sent: Friday, January 30, 2009 2:17 PM
To: foi.mrcu
Subject: Fol request 30/01/2009

Application made to: Mary McMillan, Information Manager, Mosquito Research and Control Unit

Surname: [redacted]
First Name: [redacted]
Organisation: [redacted]
Postal address: [redacted]
Postal code: [redacted]
Home phone number: (345) [redacted]
Work phone number: (345) [redacted]
email address: [redacted]
fax: (345) [redacted]

Non-personal information request

The records I request are:

Any report/s examining or making any conclusion on the effects of mosquito control efforts in Cayman on the health of humans, animals, plants and/or the environment.

Expedited request? No

I wish to receive the records in the following format: email

I want to have all records e-mailed to me. If that is not possible copies may be faxed or I can pick them up at the appropriate office.

Kind regards,

[redacted signature]

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2/24/2009

Dear

In response to your request for "any report/s examining or making any conclusion on the effects of mosquito control efforts in Cayman on the health of humans, animals, plants and/or the environment." . Over the years there have been a number of reports and studies investigating the impact of MRCU mosquito control activities on the environment and on human health. I have detailed these studies below and where possible provided you with a copy of the relevant report. I have divided the studies into those commissioned or carried out by MRCU, those carried out by other Government departments and external reports and studies carried out by the U.S. EPA.

MRCU reports and investigations

1968 – Prior to commencing aerial adulticiding operations on Grand Cayman MRCU commissioned a report into "The aerial application of Insecticides for mosquito control on Grand Cayman". The study was carried out by Dr. J.A. Armstrong of the Canada Department of External Aid. Section VIII 2 C, parts 1 and 2, of this report considered both the physical and health hazards associated with the aerial application of insecticides. It concluded that provided insecticides are properly applied there will be no mortality of small animals, birds or fish, and shrubbery will not be affected. A full copy of this report has been supplied.

Between 1987 and 1989 MRCU commissioned Mote Marine to carry out an extensive study on the effect of MRCU control operations on the environment. To date I have been unable to locate a final copy of the findings of this study. I have provided all documentation I have in relation to this study including interim findings and recommendations. I will provide a full copy of the report when I locate it.

In 2002 MRCU commissioned a review of insecticide-based mosquito control in the Cayman Islands. The report was entitled "Safety of Mosquito Control insecticides used on Grand Cayman : A white paper". The report was prepared by Professor Joel Coates, Professor of Entomology and Toxicology at Iowa State University. It concluded that the chemicals used by MRCU do not represent any health hazards to humans, pets or wildlife. A copy of the report has been supplied. In addition to this report Professor Coates analyzed a number of cistern water samples to look for the presence of insecticide residues. No quantifiable insecticide residues were found.

In 2006 blood samples from 29 MRCU staff members where taken to determine their Acetyl-choline esterase levels. Samples where analysed by Dr John Heidlingsfelder of the medical laboratory facility, George Town hospital. Dr. Heidlingsfelder has reported that all samples collected and analyzed were found to be within the normal range of 5.7 – 9.0 AChE Units per ml; an indication that the MRCU staff members tested have not been exposed to excessive levels of organophosphates. A copy of the results has been supplied.

In April 2008 MRCU purchased Gas Chromatography and High Pressure Liquid Chromatography equipment to monitor possible environmental contamination at its new

Operations Building on Red Gate Road, George Town. Four deep wells were drilled to allow sampling of ground water for pesticide contamination. Sampling of these wells is carried out at six month intervals and to date no insecticide has been detected in the ground water. The equipment has also been used to monitor potential work-place contamination with insecticides. Insecticide residues below the level of quantification (extremely small amounts) have been detected on vehicle steering wheels, door handles and other surfaces. This work is an ongoing study and has not yet been published in any formal report.

Other Government Departments reports and studies

As far as I am aware, there have been no studies or reports carried out by other government departments which specifically looked at the effects of mosquito control efforts in Cayman on the health of humans, animals, plants and/or the environment. The Cayman Islands Health Services Department did undertake a study in 2001 entitled "Cancer Rates in the Cayman Islands: A comparison of available data with international rates of cancer incidence, mortality and survival".

External reports and studies on insecticides used by MRCU

The U.S. Environmental Protection Agency (EPA) monitors and controls the use of insecticides used in mosquito control in the U.S. MRCU uses only insecticides that have been approved by the EPA. The EPA website www.epa.gov contains a large collection of reports concerning the safety and environmental impact of all the chemicals used by MRCU. I have supplied a selection of relevant reports from this website on the chemicals currently in use by MRCU. These reports are:

Bacillus thuringiensis subspecies *israelensis* strain EG2215 (006476) Fact Sheet

Environmental Protection Agency PESTICIDE FACT SHEET METHOPRENE.

Bifenthrin; Pesticide Tolerance.

Permethrin facts (re-registration eligibility decision (RED) fact sheet)

Pesticidal chemicals classified as known, probable or possible human carcinogens

Overview of Temephos revised risk assessments.

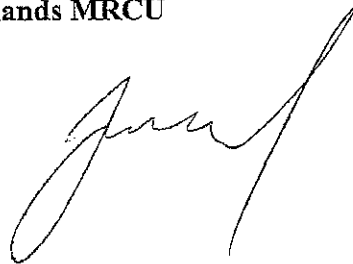
Overview of Naled revised risk assessment. (Not used by MRCU, but is the most commonly used adulticide in the US).

Summary

Since the start of its chemical control operations against mosquitoes MRCU has maintained a policy of using only the safest products available. Neither DDT nor Dieldrin has ever been applied by MRCU, even when they were still widely used in the U.S. Monitoring the environmental and health effects of the chemicals applied by MRCU has always been given high priority and to date we have no evidence of any harmful effects on human health or the environment. MRCU is the only Mosquito Control Agency of which I am aware that carries out routine environmental monitoring for the chemicals it uses. The Cayman Islands is one of the few countries in the region free from endemic mosquito-borne diseases such as Dengue, malaria and West Nile Virus. This is in large part due to the safe and effective control of mosquitoes by MRCU. I hope that I have fully answered your question concerning the environmental and health impact of chemical control operations carried out by MRCU. If you have any further questions or concerns, or you are not satisfied with any of the answers I have given I will be more than happy to respond further.

Sincerely

**Dr Alan Wheeler
Assistant Director
Cayman Islands MRCU**



26/2/09

3pm

From:
Sent: Thursday, February 26, 2009 4:49 PM
To:
Subject: FW: FoI package

FYI

From: [REDACTED]
Sent: Thursday, February 26, 2009 3:45 PM
To:
Cc:
Subject: FoI package

Hi

I have just received the package responding to my FoI request regarding studies that have been done on mosquito spraying in the Cayman Islands.

Everyone down here was really impressed by the efforts you have gone to with compiling this information and I want to thank you for your cooperation and assistance.

Unfortunately, in this line of work, we get accustomed to government agencies ignoring us, fobbing us off or putting obstacles in our way. It was really refreshing and reassuring to get this level of cooperation, openness and transparency from the MRCU.

I thought making such a request was a great opportunity to lay to rest a lot of the suspicions and rumors about the safety of mosquito sprays once and for all.

So thanks for your help. I just wanted to email to let you know we really do appreciate the effort you have gone to with this.

Thanks and regards,

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2/26/2009
