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Report on
Possible Use of Chemical
Warfare Agents in
Southeast Asia

Refugee Interviews at
Ban Vinai
5 May 1982

Department of External Affairs
Canada
1982

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Possible Use of Chemical Warfare

Agents in Southeast Asia

Refugee Interviews at

Ban Vinai 5 May 1982

Executive Summary

1. These interviews are similar to earlier ones gathered during 1980 and 1981 and submitted to the United Nations in March 1981. The duration of time over which interviews have been taken (six years) and their consistency tends to substantiate the charges that some sort of chemical agent is being used in Southeast Asia.
2. During the interviews the usual difficulties of interpretation were encountered. As a result there are certain inconsistencies in the individual interviews. However when viewed as a whole the accounts are coherent.
3. While initial laboratory analysis of three blood samples showed a peak corresponding to HT-2 toxin, the presence of trichothecenes during later analysis stages could not be established.
4. Certain of the samples provided could not be used because of serious deterioration which took place due to the time element in transportation and to the packaging and handling techniques.
5. This report underlines the urgent requirement, to improve international verification and control procedures related to chemical and/or biological weapons use.

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SECTION I - INTRODUCTION AND REPORT

Possible Use of Chemical Warfare
Agents in Southeast Asia
Refugee Interviews at
Ban Vinai 5 May 1982

1.1 Introduction

The Canadian Government has been concerned about reports of the use of chemical agents in Southeast Asia. Reports were first received from Laos in 1976 and later from Cambodia in 1979. As a result of this concern Canada supported a 1980 United Nations resolution (35/144C) which requested the Secretary-General to establish a group of experts to investigate allegations of use and a later (1981) resolution (36/96C) which extended the group's mandate.

In response to a request by the Secretary-General, Canada submitted a number of interviews obtained by Canadian immigration officers during their routine duties in the screening of applicants. These interviews clearly indicated that some sort of attacks had been made against villages and groups of refugees, particularly those from the Laotian highlands.

While the report of the United Nations Experts Group was inconclusive in this regard, the General Assembly decided to extend its mandate to carry on with its investigation with the objective of reporting to UNGA 37.

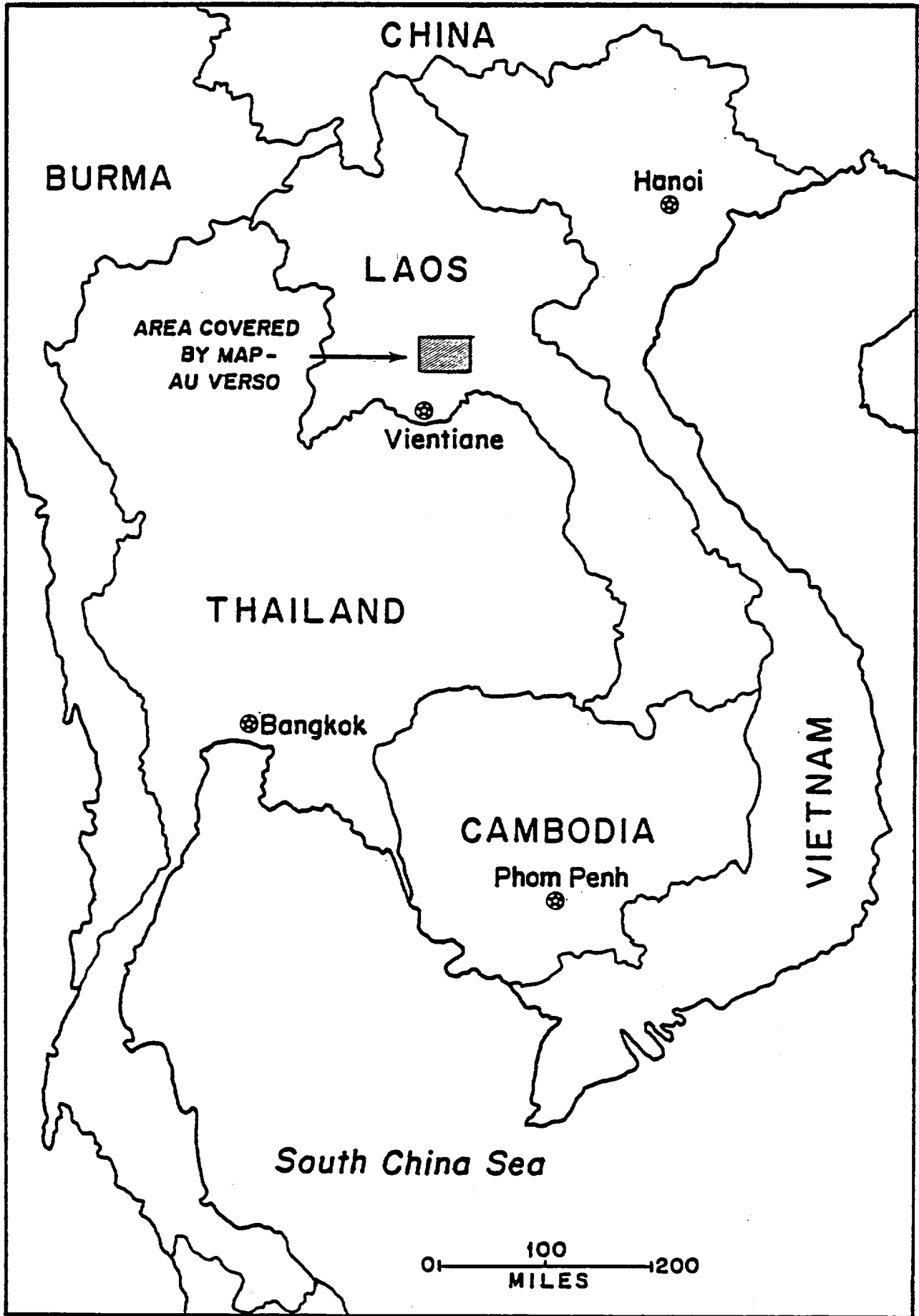
Two further reports were submitted to the Secretary-General by Canada in support of the investigation by the Experts Group. The first was a toxicological study carried out by Dr. H. Bruno Schiefer at the invitation of the Department of External Affairs. This study was submitted on June 21 and published by the United Nations as document number A/37/308. An epidemiological study initiated by the Surgeon General of the Canadian Armed Forces was conducted by a medical team and made available to the Secretary-General on August 25, 1982.

1.2 Refugee Interviews at Ban Vinai

... This report summarizes interviews conducted by Canadian officials on May 5, 1982. These interviews concern alleged attacks which took place, in spring 1982 in a river valley (see attached map and overlay, shaded area) in Laos approximately thirteen kilometres to the

southwest of the Phu He mountain feature, and in the area of map coordinates TF 8174, latitude 18 degrees 45 minutes North, longitude 102 degrees 55 minutes East. The valley contains a number of small Hmong villages. According to the witnesses, these villages have been regularly visited by Lao People's Liberation Army troops, sometimes in the company of People's Army of Vietnam troops. The troops would usually visit once a month and stay five to ten days. There were no soldiers in the villages on the day of the attack. Several villages had reportedly been attacked with chemical agents on previous occasions. The interviews in section two are from talks with four witnesses to the attacks. The witnesses who come from various villages claimed to have heard, but not seen, a jet aircraft fly over their villages. They then observed a wet, yellow sticky substance fall to the ground where it formed into small beads. Several witnesses were actually hit by the substance. The witnesses claimed that a total of approximately eighty persons died in their villages, although the maximum seen by any one witness was sixteen deaths. Many more villagers were affected but survived. Symptoms reported in all cases were the classic ones including vomiting with blood and diarrhoea with blood. Animals and plants were also affected.

As the witnesses themselves were affected by the alleged chemical attack to a greater or lesser extent, and several bore severe skin lesions, two doctors working at the camp hospital drew blood and obtained urine samples from all witnesses. These samples were presented to the Canadian Immigration officers for further analysis in Canada. A report of the initial analysis carried out by Health and Welfare Canada is included in section three. The doctors did not know the cause of these skin lesions but agreed that they were not the result of scabies. It should be noted that one Canadian foreign service officer familiar with the symptoms of chemical warfare and who has worked in refugee camps over the past two years in the region had never before encountered such severe and extensive skin lesions. Photos of the interviewed witnesses are included in section two. It should be noted that the skin lesions have been treated with calamine lotion and appear paler than they actually were.



SECTION II - INTERVIEWS AND PHOTOGRAPHS

Interview 1 - Vang Mai - (Age 22)

2.1 Interview - Vang Mai

Vang Mai, a 22 year old Hmong male claimed that a chemical attack took place in the vicinity of the town of Phu He (TF 9377) on 03 April 1982 at approximately 1800 hours. The day was partially cloudy. There was no wind. He, and a party of three other persons, collected samples of the chemical substance seven days after the attack. Vang Mai, accompanied by six other Hmong crossed the Mekong river on 25 April 1982 and reached Ban Vinai refugee camp on 30 April 1982 where he presented the sample to Vang Neng, the Hmong camp chief. Thai border authorities had confiscated approximately half of the sample upon the group's arrival into Thailand.

At the time of the 03 April attack, Vang Mai was in an area located approximately one hour's walk from the village of Phu He, population about 900 persons. Vang Mai was eating at the time when he heard, but did not actually see, a jet aircraft make one pass over or near the village. Shortly afterwards he saw a yellow gas descend nearby. The first thing that Vang Mai did was to cover up his food with a blanket. The yellow substance stuck in sticky spots to trees and plants in the area. Afterwards the substance dried in spots and remained yellow in colour. It could be found in most areas of the village and its environs. In some places the chemical had passed through the tree canopy and onto the roofs of houses. Vang Mai visited Phu He shortly after the attack and then returned home. He came back to the village seven days later in order to collect the samples. It did not rain in the interval.

Vang Mai claimed that he personally saw sixteen persons die in the village. Those who were covered in the gas died very quickly. They included a two-year-old and a three-year-old child. Both died having vomited blood and having had diarrhoea with blood. Other victims who only smelled the gas died more slowly. Among the dead were youths eight to eighteen years of age plus several old men who tried to counteract the effects of the gas by smoking opium. They died after five to seven days. They apparently had diarrhoea with blood, then later without. All had skin irritations and itchiness. Some vomited with blood. There were many other villagers who were sick but their numbers were not known to Vang Mai.

A number of animals died over a period of one to five days after the attack. One water buffalo and three cows died after eating contaminated leaves. The water buffalo was seen to have a clear water fluid flow out of its mouth and nose. It then went into convulsions and died. It was not known if the water buffalo had had diarrhoea or not. Five pigs died after apparently drinking contaminated water. A large number of chickens, but no ducks, also died from unknown causes. Cats and dogs that lived with the households did not die.

Various plants were also affected by the chemical substance. Leaves of tapioca plants dried up and died. Those who ate tapioca tubers afterwards were not affected since the tubers had not been exposed to the open air. Any banana leaves that were covered with the yellow sticky substance dried out within three or four days. Some leaves fell off while others only had holes through them. The banana trees themselves did not die.

While Vang Mai was actually collecting samples, he took care to cover his nose and throat with a cloth. Nevertheless, he was affected. He developed a constantly runny nose, his eyes became swollen and he became tired enough to want to go to sleep. The only medicine that he took was quinine. The samples were collected from tables, trees, leaves and rocks. Wherever possible, a bamboo stick was used so as not to come into contact with the yellow powder. At the time of interview, Vang Mai appeared to be healthy and alert.

Interview 1 - Vang Mai (Age 22)



Interview 2 - Seng Pao Moua (age 32)

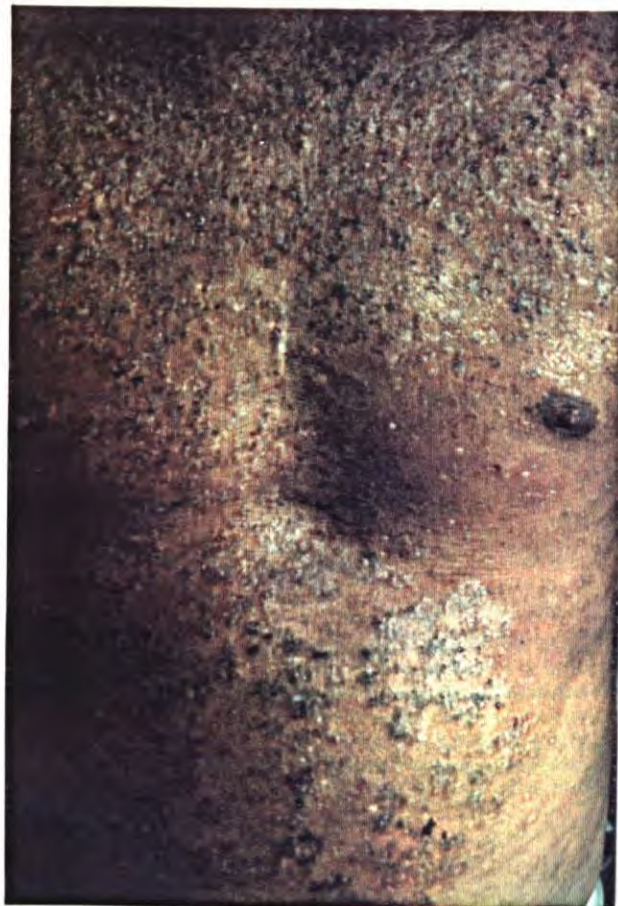
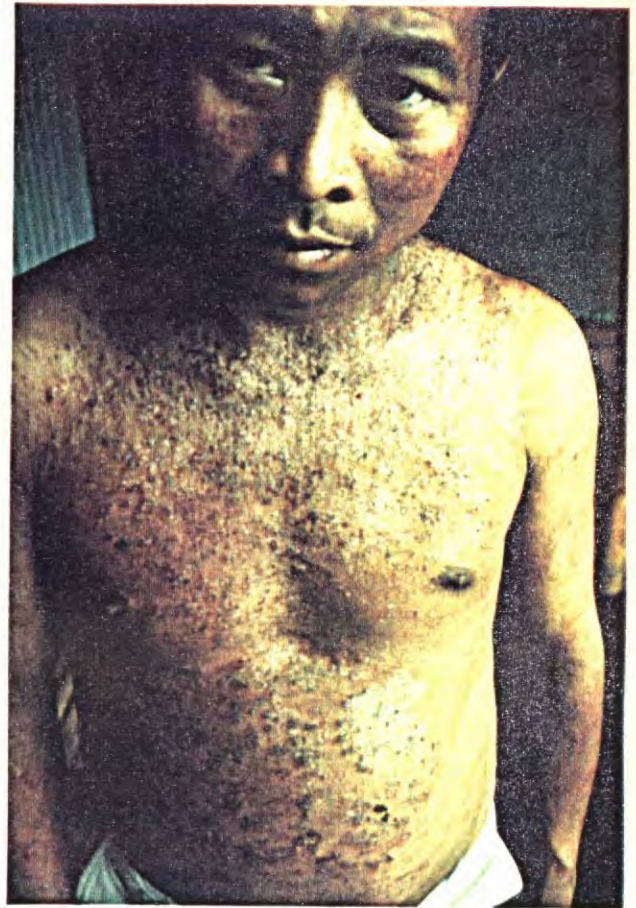
2.2 Interview - Seng Pao Moua

Seng Pao Moua, a 32-year-old Hmong male, was working with his family in the field planting rice at the time of the attack. The field was located about one hour's walk from his village in the Phu He area. The weather was cloudy. Seng Pao Moua heard a jet aircraft but did not see it. The aircraft made one pass and was gone. He claimed that his village had been attacked by aircraft on three previous occasions.

Approximately five minutes after the departure of the aircraft, Seng Pao Moua saw a yellow gas descend on the area. It covered trees, leaves and rocks and hit him and his family "wet like rain but with a different feeling". Seng Pao Moua was wearing a short-sleeved shirt and long pants at the time of the attack. The yellow substance felt "hot like chillies" on the skin which immediately turned red. Seng Pao Moua vomited with blood for about one hour. He felt nauseous, had chest pains and breathing difficulties, swollen eyes and a runny nose. He experienced blurred vision and could not see objects up close. His throat was sore enough that he could not drink or eat. Seng Pao Maua felt deaf for one night and continued to have diarrhoea with blood for six days. His wife and four children exhibited the same general symptoms but remained in Laos. Seng Pao Moua thought that the reason he did not die was the fact that he smoked a great deal of opium. He travelled to Thailand with the same group of interviewees but had not collected any samples himself.

Seng Pao Moua personally saw about sixteen people die in his village. They either died the night of the attack or during the following day. The first to die were babies, then middle aged adults and some very old persons. All had vomited with blood and had diarrhoea with blood. There were many other affected villagers who did not die. Approximately forty pigs died overnight in the village, apparently after having eaten affected leaves and grass. A large number of chickens also died. Among plants, Seng Pao Moua noted that leaves from the tapioca dried up and died.

At the time of interview, Seng Pao Moua still had difficulty in breathing and had a painful chest. His skin in the affected areas was very itchy and sometimes felt as if it were burning. He still felt tired, weak and had no appetite.



Interview 3 - Lor Xiong (age 15)

2.3 Interview - Lor Xiong

Lor Xiong, a fifteen year-old male Hmong, was working in a field approximately 200 metres from the village of Ban Pak Oi in the Phu He area at the time of the attack. He heard, but did not see, a jet aircraft make one pass over the area of his village. The weather at that time was partially cloudy. Shortly after the departure of the aircraft, Lor Xiong saw a yellow rain shower descend on him. The substance felt wet and passed right through his long sleeved shirt and long pants. Lor Xiong immediately went home to change his clothes and to wash. Approximately ten minutes after he had washed he began to feel sick. He felt pain in his chest and had difficulty in breathing. He became very drowsy and his hearing became impaired. Lor Xiong continually vomited with blood during the night. He also had diarrhoea with blood during the same night and throughout the following day. He did not take any medicine.

Lor Xiong saw one person die after having eaten contaminated food, possibly tapioca. Many other villagers became ill. His sisters, who were at home in their thatched hut during the attack, were not at all affected. Lor Xiong saw a large number of chickens die in the village. Some plants, including tapioca, developed dry leaves and died.

At the time of interview, Lor Xiong continued to experience chest pains and had difficulty in breathing when walking. Sixty to seventy percent of his body, including face, was covered with severely discoloured skin lesions that looked like scabs and eruptions. The skin remained very itchy and painful. Medical doctors at Ban Vinai have not been able to identify the cause of the skin problem but agreed that it was not the result of scabies. Lor Xiong appeared very subdued and tired throughout the interview.

Interview 3 - Lor Xiong (Age 15)





Interview 4 - Lee Pao Xiong (age 16)2.4 Interview - Lee Pao Xiong

Lee Pao Xiong, a sixteen year old Hmong male, was working in a field during the time of the attack. He did not see the aircraft but claimed that it was a jet from the sound of the engines. He did not see any substance descend to the ground but later noted small sticky yellow spots on nearby vegetation and on the ground. Although none of the substance had landed on him, Lee Pao Xiong thought that he inadvertently brushed against some contaminated material. He did not vomit or develop diarrhoea, but his eyes became swollen and runny, he had a sore throat and his nose felt irritated. He had some difficulty in breathing. Lee Pao Xiong developed small skin lesions on his front torso. More seriously, he developed small lesions like burns on his left leg. These lesions developed into a massive sore that has not healed. At the time of interview, it was still very painful and itchy. It continued to fester.

Lee Pao Xiong claimed that he saw sixteen people rapidly die in his village. Plants and animals in the area of the village also were affected with some pigs, chickens, ducks and water buffalo dying.



SECTION III - LABORATORY RESULTS

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du Canada

MEMORANDUM

NOTE DE SERVICE

TO
A

External Affairs.

FROM
DEPeter Scott,
Health and Welfare Canada.

SECURITY - CLASSIFICATION - DE SECURITE
OUR FILE/NOTRE REFERENCE
YOUR FILE/VOTRE REFERENCE
DATE July 30, 1982.


SUBJECT
OBJET 3.1 Search for Trichothecenes in Blood Samples from S.E. Asia.

Plasma from 5 blood samples - Kai Lor, Sang Pao Mova, Lor Xiong, Lee Pao Xiong, and Vang Mai - were extracted and heptafluoro butyrate derivatives formed. They were screened by gas chromatography with electron capture detection for nivalenol, nivalenol 4-acetate (fusarenone X), deoxynivalenol, deoxynivalenol 3-acetate, neosolaniol, T-2 toxin and HT-2 toxin. No deoxynivalenol, neosolaniol or T-2 toxin were detected. Peaks corresponding in retention time to fusarenone-X, deoxynivalenol 3-acetate, and nivalenol were detected, the last 2 barely distinguishable from background. In 3 samples - Kai Lor, Lor Xiong and Lee Pao Xiong - a peak corresponding to HT-2 toxin, again barely distinguishable from background, was seen. HT-2 toxin could not be confirmed by capillary gas chromatography - mass spectrometry (detection limit 5 ppb); nor were deoxynivalenol or nivalenol detected on screening by this procedure. In view of the absence of deoxynivalenol and nivalenol, the presence of their acetates is unlikely in blood. However, the question of whether nivalenol 4-acetate (fusarenone-X) or an interference is present in the blood samples should be checked by us later.

Conclusion: the presence of trichothecenes in the 5 blood samples has not been established.

Peter M. Scott, Ph.D.
Food Research Division.

c.c. P.-Y. Lau

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