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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Incidents Coded by Number in Final Report

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Review of Carbofuran Incident Reports
DP Barcode D238109, Chemical #090601, Reregistration
Case #0101

FROM: Jerome Blondell, Ph.D., Health Statistician
Chemistry and Exposure Branch II
Health Effects Division (7509C)

Monica F. Spann, M.P.H., Environmental Protection
Specialist
Chemistry and Exposure Branch II
Health Effects Division (7509C)

THRU: Raymond Kent, Chief
Chemistry and Exposure Branch II
Health Effects Division (7509C)

TO: Jack Arthur, Environmental Health Scientist
Chemistry and Exposure Branch II
Health Effects Division (7509C)

BACKGROUND

The following data bases have been consulted for the poisoning incident data on the active ingredient Carbofuran (PC Code: 090601):

1) OPP Incident Data System (IDS) - reports of incidents from various sources, including registrants, other federal and state health and environmental agencies and individual consumers, submitted to OPP since 1992. Reports submitted to the Incident Data System represent anecdotal reports or allegations only, unless otherwise stated. Typically no conclusions can be drawn implicating the pesticide as a cause of any of the reported health effects. Nevertheless, sometimes with enough cases and/or enough documentation risk mitigation measures may be suggested.

2) Poison Control Centers - as the result of Data-Call-Ins issued in 1993, OPP received Poison Control Center data covering the years 1985 through 1992 for 28 organophosphate and carbamate chemicals.

Most of the national Poison Control Centers (PCCs) participate in a national data collection system, the Toxic Exposure Surveillance System which obtains data from about 70 centers at hospitals and universities. PCCs provide telephone consultation for individuals and health care providers on suspected poisonings, involving drugs, household products, pesticides, etc.

3) California Department of Food and Agriculture (replaced by the Department of Pesticide Regulation in 1991) - California has collected uniform data on suspected pesticide poisonings since 1982. Physicians are required, by statute, to report to their local health officer all occurrences of illness suspected of being related to exposure to pesticides. The majority of the incidents involve workers. Information on exposure (worker activity), type of illness (systemic, eye, skin, eye/skin and respiratory), likelihood of a causal relationship, and number of days off work and in the hospital are provided.

4) National Pesticide Telecommunications Network (NPTN) - NPTN is a toll-free information service supported by OPP. A ranking of the top 200 active ingredients for which telephone calls were received during calendar years 1984-1991, inclusive has been prepared. The total number of calls was tabulated for the categories human incidents, animal incidents, calls for information, and others.

CARBOFURAN REVIEW

I. Incident Data System

Please note that the following cases from the IDS do not have documentation confirming exposure or health effects unless otherwise noted.

Incident# 000124 009

1992
1 A pesticide incident occurred in 1992, when an employee got carbofuran in their eyes. The employee experienced pinpoint pupils. No further information on the disposition of the case was reported.

Incident# 000124 010

2 A pesticide incident occurred in 1992, when a worker was exposed to carbofuran while cleaning up the chemical after it had fallen off a truck. No further information on the disposition of the case was reported.

Listed below are reports of eighteen individual incidents involving carbofuran in 1992.

Incident# 000165 008

3 A grower applied carbofuran and experienced pinpoint pupils.

Incident# 000165 010

4 { An individual got carbofuran in their eyes. Specific symptoms were not mentioned.

Incident# 000165 011

An individual got carbofuran in their eyes. Specific symptoms were not mentioned.

Incident# 000165 019

5 A worker was near a field that had been sprayed with carbofuran and experienced blurred vision.

Incident# 000165 021

6 A worker, who is diabetic, sprayed a field with carbofuran and experienced malaise.

Incident# 000165 022

7 A worker got carbofuran in their eyes while spraying a field and experienced blurred vision.

Incident# 000165 023

8 An individual got carbofuran in their face and specific symptoms were not mentioned.

Incident# 000165 026

9 A grower was smoking while applying carbofuran and experienced nausea, pinpoint pupils, and blurred vision.

Incident# 000165 031

10 A farmer spilled carbofuran on their hands while spraying the chemical. Specific symptoms were not mentioned.

Incident# 000165 032

11 A grower was exposed to carbofuran after cleaning out a sprayer and a hose and experienced nausea.

Incident# 000165 034

12 A worker applied carbofuran seven days earlier and experienced headaches, but has a history of migraines.

Incident# 000165 039

- 13 An individual experienced exposure to carbofuran that affected their eyes while their truck was being unloaded. Specific symptoms were not mentioned.

Incident# 000165 040

- 14 A worker sprayed carbofuran for 13 hours and experienced blurred vision.

Incident# 000165 049

- 15 An individual was exposed to carbofuran that splashed in their eyes. Specific symptoms were not mentioned.

Incident# 000165 050

- 16 An individual got carbofuran in their eyes. Specific symptoms were not mentioned.

Incident# 000165 051

- 17 Occupants of a home adjacent to agricultural fields were exposed to carbofuran. Specific symptoms were not mentioned.

Incident# 000165 055

- 18 A worker applied carbofuran all day and felt ill. Specific symptoms were not mentioned.

Incident# 000165 057

- 19 An individual was exposed to carbofuran that splashed in their eyes. Specific symptoms were not mentioned.

1993 Incident# 000444 001

- 1 A pesticide incident occurred in 1993, when two cases were exposed to carbofuran while an area was being aurally sprayed. Specific symptoms were not mentioned.

Incident# 000444 012

- 2 A pesticide incident occurred in 1993, a sixty-two year old farmer was exposed to carbofuran and other chemicals after repeatedly wearing contaminated clothing one year prior to contracting lupus. He died from an irregular heartbeat and a heart attack. No further information on the disposition of the case was reported.

Incident# 000444 025

A pesticide incident occurred in 1992, when an individual was exposed to carbofuran and aldicarb after cleaning application equipment. Specific symptoms were not mentioned at the time but one year later they experienced headaches and skin blister. No further information on the disposition of the case was reported.

Incident# 000579 001

A pesticide incident occurred in 1993, when a male worker, who was wearing personal protective clothing, was exposed to carbofuran and other pesticides while mixing and loading the chemicals. On a very hot day, he removed his respirator when he wasn't mixing or loading the chemicals and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 000579 002

A pesticide incident occurred in 1993, when a male worker, who was wearing personal protective clothing, was exposed to carbofuran and other pesticides while mixing and loading the chemicals. On a very hot day, he removed his respirator when he wasn't mixing or loading the chemicals and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 000579 003

A pesticide incident occurred in 1993 on a very hot day, when a male worker, who was wearing ~~personal protective~~ clothing 90% of the time, handled carbofuran and other pesticides and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 000579 004

A pesticide incident occurred in 1993 on a very hot day, when a male worker handled carbofuran and other pesticides for a week and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 000579 005

A pesticide incident occurred in 1993, when a pilot sprayed carbofuran and other pesticides. The pilot cleaned out a clogged nozzle at the bottom of a tank with a wire. The wire cut his glove and the back of his hand. He and his son, who is a mixer/loader, felt ill. The father and the son had depressed cholinesterase levels but it could not be determined from the information provided

if a baseline was taken. This means the significance of the depression is difficult to judge. The father stayed overnight in the hospital. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Listed below are reports of twelve individual incidents involving carbofuran in 1993.

Incident# 000582 001

2 A twelve year old girl got into an open bag of granules. Specific symptoms were not mentioned.

Incident# 000582 019

3 A worker was filling granular boxes on a planter and carbofuran got into their eyes. Specific symptoms were not mentioned.

Incident# 000582 020

4 A worker was mixing carbofuran which splashed on them. Specific symptoms were not mentioned.

Incident# 000582 027

5 A worker was spraying carbofuran and felt ill. Specific symptoms were not mentioned.

Incident# 000582 029

6 A male worker was using a hand sprayer to apply carbofuran and became ill. Specific symptoms were not mentioned.

Incident# 000582 033

7 A male worker was pumping carbofuran and was sprayed with the chemical when the hose came out of the drum. Specific symptoms were not mentioned.

Incident# 000582 048

8 A grower was cleaning application equipment and felt ill. Specific symptoms were not mentioned.

Incident# 000582 049

9 An individual was cleaning out an old barn and found open bags of carbofuran. He accidentally spilled the chemical and felt ill. Specific symptoms were not mentioned.

Incident# 000582 051

- 10 A grower was spraying carbofuran without personal protective equipment and became ill. Specific symptoms were not mentioned.

Incident# 000582 053

- 11 Children were playing near an area where carbofuran was being loaded into granular boxes and got granules into their eyes. Specific symptoms were not mentioned.

Incident# 000582 057

- 12 A worker was spraying carbofuran all day and felt ill. Specific symptoms were not mentioned.

Incident# 000582 058

- 13 A grower was cleaning out a planter and came in contact with the granules and felt ill. Specific symptoms were not mentioned.

Incident# 000707 003

- 14 A pesticide incident occurred in 1993, when an airplane loader got granules on his arms during hot and humid weather and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 000707 004

- 15 A pesticide incident occurred in 1993, when a hose sprayer broke and a diluted spray got on an applicator. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 000707 005

- 16 A pesticide incident occurred in 1993, when a grower, who was not wearing personal protective equipment, sprayed carbofuran all day and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 000707 009

- 17 A pesticide incident occurred in 1993, when a sixty-eight year old man was driving past an alfalfa field that was aeriually oversprayed with carbofuran. Two weeks later, the man was in a coma with kidney and liver failure and died shortly thereafter. No further information on the disposition of the case was reported.

Incident# 000707 011

(Suicide from half empty container of carbofuran)

Incident# 000707 013

17 ~~18~~ A pesticide incident occurred in 1993, when a grower, who was not wearing personal protective equipment, was spraying carbofuran all day and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 000707 015

18 A pesticide incident occurred in 1993, when a grower, who was wearing minimal personal protective equipment, was spraying carbofuran all day and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 000707 016

19 A pesticide incident occurred in 1993, when a grower, who was not wearing a respirator, inhaled spray during a spray operation and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 000707 022

20 A pesticide incident occurred in 1993, when an applicator was cleaning spray tips and the spray rig malfunctioned and was turned on and sprayed the applicator. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 000707 025

21 A pesticide incident occurred in 1993, when a scale repair company employee was servicing a scale at a manufacturing plant and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 000707 027

22 A pesticide incident occurred in 1993, when an applicator was sprayed with a mixture after a hose broke and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 000707 051

23 A pesticide incident occurred in 1993, when several commercial applicators and growers applied carbofuran to cotton and felt ill. All of the workers were not wearing personal protective clothing during the mixing and loading process. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 000707 052

Same incident as above.

Incident# 000714 001

Update to 000669 001.

Incident# 000833 001

AAPCC data for carbofuran.

Incident# 000843 003

24 In a lawsuit, the plaintiff alleged that carbofuran was applied by a crop dusting service, causing pain and suffering which resulted in the need for medical care and hospitalization.

Incident# 000844 005

25 A pesticide incident occurred in 1993, when an individual got carbofuran in their eyes and four days later developed a dry tongue. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 000844 016

26 A pesticide incident occurred in 1993, when a grower got carbofuran on an area of his body and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

1994 Incident# 001028 019

1 A pesticide incident occurred in 1994, when a worker was applying carbofuran which spilled onto their skin which was not washed off and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001028 024

2 A pesticide incident occurred in 1994, when a worker used their mouth to clean clogged application equipment and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001028 025

3 A pesticide incident occurred in 1994, when an individual applied carbofuran all day and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001170 002

4 In a lawsuit, the death of a man from acute myelogenous leukemia was a result of exposure to benzene containing products.

Incident# 001170 004

5 In a lawsuit, the plaintiff alleged that exposure to carbofuran caused them to feel ill.

Incident# 001170 006

6 In a lawsuit, the plaintiff alleged that exposure to carbofuran caused them to experience nausea, vomiting and abdominal cramps.

Incident# 001179 001

7 A pesticide incident occurred in 1994, when an individual did not clean up after applying carbofuran and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001179 017

8 A pesticide incident occurred in 1994, when a worker was cleaning up the chemical and got spray in their eyes. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001179 018

9 A pesticide incident occurred in 1994, when a decontamination team, who were not wearing personal protective equipment, were hired to clean up a container that was punctured and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001179 022

10 A pesticide incident occurred in 1994, when a tractor driver with a closed cab that had an improper air filter drove through a spray cloud and felt ill. The cab did not have the proper type of filters. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001179 024

11 A pesticide incident occurred in 1994, when an individual was contaminated after opening carbofuran containers and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001179 035

12 A pesticide incident occurred in 1994, when a worker spilled carbofuran on his arms and hands while mixing the spray. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001179 036

13 A pesticide incident occurred in 1994, when a worker was applying carbofuran and got spray on their face and in their eyes. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001179 037

14 A pesticide incident occurred in 1994, when an applicator was sprayed with carbofuran when applying the chemical and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001179 039

15 A pesticide incident occurred in 1994, when an applicator was using an enclosed system and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001179 040

16 A pesticide incident occurred in 1994, when a worker, who was not properly wearing personal protective equipment, was repairing application equipment and got carbofuran on his clothes and shoes. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001179 045

17 A pesticide incident occurred in 1994, when a worker got spray in their eyes while applying carbofuran. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001179 049

18 A pesticide incident occurred in 1994, when a grower got carbofuran in their eyes during a spray application. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001179 050

19 A pesticide incident occurred in 1994, when a worker accidentally got carbofuran in his eyes when a spray hose broke. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001179 051

20 A pesticide incident occurred in 1994, when an individual treated their children's playhouse with carbofuran, which is an illegal use of the chemical. One of the children felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001179 053

21 A pesticide incident occurred in 1994, when an applicator got carbofuran in their eyes while spraying the chemical. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001179 060

22 A pesticide incident occurred in 1994, when an applicator got granules in their eyes while filling the application equipment with carbofuran. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001179 061

23 A pesticide incident occurred in 1994, when an applicator got spray in their eyes and experienced blurred vision when the spray hose broke during the application. No further information on the disposition of the case was reported.

Incident# 001179 068

24 A pesticide incident occurred in 1994, when a worker was exposed to spray mist during an application and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident #001179 070

25 A pesticide incident occurred in 1994, when an individual inhaled spray and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident #001280 029

26 A pesticide incident occurred in 1994, when a worker was cleaning the sprayer and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001280 031

27 A pesticide incident occurred in 1994, when a public utilities employee, who was wearing shorts at the time, entered a cotton field and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001280 033

28 A pesticide incident occurred in 1994, when a worker was filling a measuring cone with an incorrect value and was sprayed with carbofuran. The worker did not change their clothes and felt ill about six hours later. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001280 034

29 A pesticide incident occurred in 1994, when a worker mixed chemicals and applied the spray and later ate lunch in the treated area and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001280 035

30 A pesticide incident occurred in 1994, when an individual was contaminated with carbofuran during transportation of the chemical. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001280 041

31 A pesticide incident occurred in 1994, when applicators sprayed carbofuran and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001280 043

32 A pesticide incident occurred in 1994, when workers were cleaning a spray tank and were contaminated and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001280 046

33 A pesticide incident occurred in 1994, when a pilot felt ill following a spray application. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001280 052

34 A pesticide incident occurred in 1994, when a pilot sprayed carbofuran all day and after cleaning the spray tanks felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 001622 001

35 A pesticide incident occurred in 1994, when an individual and his nine year old daughter were sweeping their trailer unit that was previously used to store seed corn and were exposed to dust and granular fragments. Before the man swept the unit, he removed the seed corn bags. They both experienced dizziness, headaches, nausea, and increased salivation which resolved within 24 hours. No further information on the disposition of the case was reported.

Incident# 001838 034

36 A pesticide incident occurred in 1994, when eighty-five workers entered a field to perform seed production related activities two days after carbofuran was applied to the seed corn. Half of the workers experienced dizziness, headaches, and blurred vision. Three of the workers stayed overnight in the hospital after receiving atropine treatment. No further information on the disposition of the case was reported.

1995 Incident# 002292 001

1 A pesticide incident occurred in 1995, when a forty year old man and a thirteen year old male child were standing about twenty feet from a barn where carbofuran and chlorpyrifos were being mixed. They experienced weakness, nausea, shortness of breath, and vomiting. No further information on the disposition of the case was reported.

Incident# 002243 004

2 A pesticide incident occurred in 1995, when a worker was cleaning a sprayer and got carbofuran in their eyes. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 002243 006

3 A pesticide incident occurred in 1995, when an applicator was applying carbofuran and got the chemical on their clothing. The worker did not wash or change their clothes and experienced nausea and headaches. No further information on the disposition of the case was reported.

Incident# 002443 007

4 A pesticide incident occurred in 1995, when a worker was spraying carbofuran which got in their eyes. They experienced pinpoint pupils. No further information on the disposition of the case was reported.

Incident# 002443 010

5 A pesticide incident occurred in 1995, when an applicator was drenched with a diluted carbofuran spray when the hose on the sprayer broke and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 002443 011

6 A pesticide incident occurred in 1995, when an applicator was spraying carbofuran and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 002443 021

7 A pesticide incident occurred in 1995, when an applicator got a small drop of carbofuran on their arms while mixing the chemical. Later that day, the worker experienced blurred vision. No further information on the disposition of the case was reported.

Incident# 002443 023

Fish kill incident.

Incident# 002443 024

8 A pesticide incident occurred in 1995, when an applicator was spraying carbofuran and the spray got on the worker. The worker experienced vomiting. No further information on the disposition of the case was reported.

Incident# 002443 032

9 A pesticide incident occurred in 1995, when a worker was drenched with one half of a tank of diluted spray and felt ill. Specific symptoms were not mentioned. No further information on

the disposition of the case was reported.

Incident# 002443 057

10 A pesticide incident occurred in 1995, when an applicator, who was not wearing a respirator, inhaled spray and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 002443 061

11 A pesticide incident occurred in 1995, when a child ate treated seed which was thought to have been candy and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 002443 069

12 A pesticide incident occurred in 1995, when a worker was cleaning a spray rig and the diluted spray got in their eyes and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 002443 070

13 A pesticide incident occurred in 1995, when an applicator inhaled dust from the granules while applying carbofuran and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 002443 071

14 A pesticide incident occurred in 1995, when an applicator got spray in their eyes after a hose broke. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 003263 006

15 ~~10~~ A pesticide incident occurred in 1993, when eighteen people were exposed to ~~dimethoate~~ and carbofuran that was applied aurally to fifty-three acres of alfalfa. They experienced nausea, headaches, and eye and throat irritation. No further information on the disposition of the case was reported.

Incident# 003296 001

15 ~~10~~ A pesticide incident occurred in 1995, when an applicator, who wore a respirator and a short sleeve shirt, applied carbofuran aurally and experienced light headiness which subsided in one to two hours. No further information on the disposition of the case was reported.

Incident# 003296 002

A pesticide incident occurred in 1995, but information is not known on the exposure to carbofuran. The individual did not shower or change their clothing. They experienced dizziness, nausea, and vomiting. No further information on the disposition of the case was reported.

Incident# 003296 010

16 A pesticide incident occurred in 1995, when a worker, who was wearing a respirator, was using an air hose to clean equipment in a seed treating plant. Hospital personnel discovered that the worker had an irregular heartbeat. No further information on the disposition of the case was reported.

Incident# 003296 027

17 A pesticide incident occurred in 1995, when two workers applied carbofuran and experienced vomiting and headaches. No further information on the disposition of the case was reported.

Incident# 003296 032

18 A pesticide incident occurred in 1995, when a worker was drenched with diluted carbofuran when a hose broke during the transfer of the chemical from a tender to the rig. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 003296 036

19 A pesticide incident occurred in 1995, when an individual got carbofuran in their eyes. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 003296 038

20 A pesticide incident occurred in 1995, when an individual was hand spraying spruce trees and the wind blew the spray into their eyes and face. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 003296 041

21 A pesticide incident occurred in 1995, when a worker was cleaning a spray tank and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 003296 057

22 A pesticide incident occurred in 1995, when an individual was cleaning spray equipment and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 003296 076

23 A pesticide incident occurred in 1995, when an individual spilled diluted carbofuran on their body area. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 003296 081

24 A pesticide incident occurred in 1995, when an applicator was sprayed in the face when the hose broke on the sprayer and experienced pinpoint pupils. No further information on the disposition of the case was reported.

Incident# 003296 084

25 A pesticide incident occurred in 1995, when a farm worker reentered a field treated with two chemicals three hours later without personal protective equipment and experienced headaches. No further information on the disposition of the case was reported.

Incident# 003296 086

26 A pesticide incident occurred in 1995, when a grower was cleaning a spray line and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

1996 Incident# 003582 011

1 ~~2~~ A pesticide incident occurred in 1996, when a worker got carbofuran in their eyes and experienced blurred vision. No further information on the disposition of the case was reported.

Incident# 003582 023

2 ~~2~~ A pesticide incident occurred in 1996, when several worker violated safe practices while applying carbofuran and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 003582 033

3 A pesticide incident occurred in 1996, when a worker was cleaning spray equipment and got carbofuran in their eyes.

Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 003582 039

4 A pesticide incident occurred in 1996, when a grower inhaled spray and got carbofuran on their body area while cleaning the sprayer and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 003582 056

5 A pesticide incident occurred in 1996, when six workers were using defective masks during spray application and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

move to and Incident# 003599 001

The Minnesota Department of Agriculture surveyed state enforcement agencies to determine what pesticides were involved in spray drift. Among the thirty-two states responding to the survey, there was a total of 2,681 cases of drift complaints. Carbofuran was responsible for 2 complaints or less than one percent of the total.

Incident# 004284 001

In a lawsuit, the plaintiff was exposed when ^{cong list} pesticides were disposed, dumped, and spilled directly onto the ground and into water supplies. The plaintiffs experienced chest pains, neurotoxic and immunologic damage, confusion, seizures, paresthesia, hair loss, and other symptoms. The plaintiffs allege that one plaintiff died of multiple myeloma from chronic exposure to these products.

Incident# 004321 001

In a lawsuit, the plaintiff was exposed in their neighborhood causing symptoms that were not mentioned.

Incident# 004341 002

Update to 004321 and 004284.

Incident# 004439 007

6 A pesticide incident occurred in 1996, when a worker got carbofuran in their eyes while working with spray equipment. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004439 008

7 A pesticide incident occurred in 1996, when a pilot crashed an airplane while they were applying carbofuran. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004439 013

8 A pesticide incident occurred in 1996, when an applicator was drenched with a diluted spray when the application hose broke and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004439 015

9 A pesticide incident occurred in 1996, when a worker got spray in their eyes after the application hose broke. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004439 016

10 A pesticide incident occurred in 1996, when an individual applied carbofuran and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004439 027

11 A pesticide incident occurred in 1996, when workers were mixing and loading carbofuran and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004439 031

12 A pesticide incident occurred in 1996, when a worker was cleaning contaminated spray equipment and felt ill. The worker was exposed for more than eight hours and removed personal protective equipment near the end of the day due to the heat. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004439 040

13 A pesticide incident occurred in 1996, when a worker was cleaning spray equipment and got diluted spray in their eyes and experienced blurred vision. No further information on the disposition of the case was reported.

Incident# 004439 043

14 A pesticide incident occurred in 1996, when a worker, who was not wearing personal protective equipment, was fixing a sprayer and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004439 045

15 A pesticide incident occurred in 1996, when a worker, got undiluted carbofuran in their eyes and experienced blurred vision. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004439 050

16 A pesticide incident occurred in 1996, when a worker got carbofuran on their body area after remixing a diluted spray mixture that was left out overnight and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004439 054

17 A pesticide incident occurred in 1996, when a worker was cleaning out a tank and got carbofuran on their body area and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004439 055

18 A pesticide incident occurred in 1996, when an individual, who was applying carbofuran all day got the chemical on his skin and inhaled the product. The individual experienced nausea, vomiting, diarrhea, sweating, and headache. No further information on the disposition of the case was reported.

Incident# 004439 067

19 A pesticide incident occurred in 1996, when several workers, who were hired as detassellers and were not wearing personal protective equipment, entered a field forty-eight hours after it was treated with carbofuran and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004439 071

20 A pesticide incident occurred in 1996, when an applicator, who was not wearing personal protective equipment, sprayed carbofuran and felt ill and experienced headaches, and sore eyes. No further information on the disposition of the case was reported.

Incident# 004439 082

21 A pesticide incident occurred in 1996, when an individual experienced headaches and dizziness for three days after a corn field was treated about seventy-five yards from their home. The symptoms persist when the individual is both at home and away from their home. No further information on the disposition of the case was reported.

Incident# 004439 091

22 A pesticide incident occurred in 1996, when a worker was cleaning spray equipment and got diluted spray in his eyes. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident #004439 094

23 A pesticide incident occurred in 1996, when an individual was contaminated with carbofuran on the lower part of their body while unplugging clogged nozzles and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident #004439 095

Duplicate of #004439 094

Incident# 004439 096

24 A pesticide incident occurred in 1996, when a worker, who was not wearing personal protective equipment, was fixing a sprayer and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004439 099

Duplicate of #004439 045

Incident# 004439 104

Update to #004439 050.

Incident# 004439 108

Update to #004439 054.

Incident# 004439 109

Update to #004439 055.

Incident# 004439 126

25 A pesticide incident occurred in 1996, when a crop duster applied carbofuran for several days and experienced a pounding chest, weakness, nausea, and persistent sweating. No further information on the disposition of the case was reported.

Incident# 004439 133

26 A pesticide incident occurred in 1996, when several workers treated a cotton field with carbofuran and felt ill. Nine of the workers entered the wrong field and one of the workers felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004439 138

27 A pesticide incident occurred in 1996, when children detasseled corn that was treated with carbofuran and felt ill. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004439 141

28 A pesticide incident occurred in 1996, when an individual got carbofuran in their eyes. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004439 146

29 A pesticide incident occurred in 1996, when an individual spilled carbofuran on his skin. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004852 005

30 A pesticide incident occurred in 1996, when construction workers, who were not wearing personal protective equipment, were exposed to dust at a plant. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004852 023

31 A pesticide incident occurred in 1996, when two workers, who were not wearing personal protective equipment, were rinsing empty pesticide containers. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

Incident# 004852 025

A pesticide incident occurred in 1996, when an applicator got

32 carbofuran on their face when a piece of an injection application unit broke. Specific symptoms were not mentioned. No further information on the disposition of the case was reported.

II. Poison Control Center Data

Carbofuran was one of 28 chemicals for which Poison Control Center data were requested. The following text and statistics are taken from an analysis of these data; see December 5, 1994 memo from Jerome Blondell to Joshua First.

The 28 chemicals were ranked using three types of measures: (A) number and percent occupational and non-occupational adult exposures reported to PCCs requiring treatment, hospitalization, displaying symptoms or serious life-threatening effects; (B) California data for handlers and field workers comparing number of agricultural poisonings to reported applications; and (C) ratios of poisonings and hospitalization for PCC cases to estimated pounds reported in agriculture for pesticides used primarily in agriculture.

IV. NPTN

On the list of the top 200 chemicals for which NPTN received calls from 1984-1991 inclusively, carbofuran was ranked 37th and reported to be involved in 103 human incidents and 23 animal incidents.

V. Summary/Conclusions

VI. Recommendations

cc: Correspondence
 Carbofuran file (chemical no. 090601)
 RCAB -
 SRRD -

RDI: BrSrSci:SHummel: