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SCIENTIFIC DATA REVIEWS
HEALTH EFFECTS DIVISION
OPP OFFICIAL RECORD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

October 9, 2003

MEMORANDUM

SUBJECT: Review of Naphthaleneacetic Acid Incident Reports
DP Barcode D293397, Chemical #056002

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

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Monica S. Hawkins, M.P.H., Environmental Health Scientist
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THRU: Francis B. Suhre, Chief
Chemistry and Exposure Branch
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TO: Rebecca Daiss, Environmental Health Scientist
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BACKGROUND

The following data bases have been consulted for the poisoning incident data on the active ingredient Naphthaleneacetic Acid (PC Code: 056002):

- 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 a data purchase by EPA, OPP received Poison Control Center data covering the years 1993 through 1998 for all pesticides. 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 65-70 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 Pesticide Regulation - 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.

NAPHLALENEACETIC ACID REVIEW

I. Incident Data System

No data.

II. Poison Control Center Data - 1993 through 1998

No data.

III. California Data - 1982 through 2001

Detailed descriptions of 23 cases submitted to the California Pesticide Illness Surveillance Program (1982-2001) were reviewed. In 15 of these cases, naphthaleneacetic acid was used alone or was judged to be responsible for the health effects.

In the first case, the worker was sprayed in the face after a hose broke. The worker reported eye irritation. In the second case, the worker was spraying the undersides of olive trees, the hose to the wand broke on the sprayer, and the product got in his face. The worker reported eye irritation and nasal passage irritation. In the third case, the worker was cleaning up branches from trees a day after they were sprayed with the product. The worker wiped his eyes with his hands and reported eye irritation. In the fourth case, the worker was pruning olive trees and reported contact dermatitis on the forehead. In the fifth case, the worker, who did not wear

personal protective equipment, was handling spray equipment and the product got in his eyes. The worker reported chemical conjunctivitis.

In another incident, mothballs were placed in the attic to repel bats affecting two workers. Two workers (cases 6 and 7) reported headache, earache, sore throat, nausea, eye irritation, and shortness of breath. The workers were diagnosed with mild paradichlorobenzene toxicity from inhalation. The second worker (the seventh case) reported coughing, wheezing, and sinus congestion.

One female worker (case 8) reported a rash on her arms and wrists while harvesting pears. A physician treated the worker three days later when she returned home, about two hundred miles away.

In another incident, seven workers (cases 9 through 15) developed symptoms and were treated by a physician after mothballs were used inside the front wall of a building to repel bats. A strong odor permeated to the medical office in the building leading 7 workers to seek medical attention for their symptoms. The first worker reported burning and itchy eyes, sore throat, and mental confusion. The second worker reported headache, nausea, abdominal cramps, mental confusion, aching joints, and fatigue. The third worker reported burning eyes, nausea, headache, mental confusion, diarrhea, and stomach cramps. The fourth worker reported burning eyes, sneezing, post nasal drip, and a headache. The fifth worker reported nausea, headaches, abdominal pain, rash on the face, neck and shoulders, and burning. The sixth worker reported burning eyes and a sore throat. The seventh worker reported nausea, headache, burning eyes, and a sore throat. All of the cases in this one incident were categorized as definitely due to exposure to NAA.

IV. National Pesticide Information Center

On the list of the top 200 chemicals for which NPIC received calls from 1984-1991 inclusively, naphthaleneacetic acid was not reported to be involved in human incidents.

V. Scientific Literature

No scientific literature was located concerning acute poisoning due to exposure to naphthaleneacetic acid.

VI. Conclusions

Relatively few incidents of illness have been reported due to naphthaleneacetic acid. The only reliable information was reported through the California Pesticide Illness Surveillance Program. Over a 20 year period there were just 15 individuals reporting effects as a result of 7 incidents. One incident involved seven people who reported a number of symptoms such as headache, nausea, abdominal pain, burning eyes and throat. Most of the individual cases reported skin or eye effects resulting from inadvertent exposure. The use of this product inside walls that vent in to occupied rooms appears to pose a hazard due the offensive odor. None of these cases were hospitalized, but a few took time off from work due to their illness.

VII. Recommendations

Precautions should be specified on the label to be sure that product is not placed in enclosed spaces that vent to occupied rooms.

cc: Correspondence
Naphthaleneacetic Acid file (chemical no. 056002)
Mark Howard, SRRD - (7508C)