

M e m o r a n d u m

To: Paul Gosselin, Assistant Director
Division of Enforcement, Environmental
Monitoring, and Data Management
1020 N Street, Room 100
Sacramento, California 95814-5624

Date : March 28, 1997

From: Department of Pesticide Regulation - 1020 N Street, Room 161
Sacramento, California 95814-5624

Subject: AGRICULTURAL USE DETERMINATION FOR HEXAZINONE RESIDUES
IN GROUND WATER

Hexazinone is an active ingredient in several economic poisons (herbicides) that have been registered for use in California for many years. The total numbers of pounds of hexazinone used in California during the years 1992-1995 were 111,954; 149,824; 139,201; and 101,759 respectively. During those years, approximately 53% to 70% of the total use was on alfalfa and 21% to 46% was used on forests.

Well water samples collected in California have been analyzed for hexazinone for a number of years. Information from the Well Inventory database shows that in 1990, samples from 50 wells were analyzed for hexazinone. Subsequent totals were 262 wells in 1993, 192 in 1994, 626 in 1995, and 180 wells in 1996. Hexazinone was detected in a well in 1995 (Z289), and in another well in 1996 (Z404). Those detections did not meet the criteria for legal agricultural use; therefore, they were considered to be the result of point sources. In October 1996, hexazinone was detected in single wells in two adjacent sections in San Joaquin County (Attachment 1). This was the first instance where hexazinone residues, not resulting from a point source, were found in



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two wells within one mile of each other. An additional 15 wells in the area around the contaminated wells were sampled about two months later. However, no additional hexazinone contaminated wells were found (Attachment 2).

Pursuant to Section 13149 of the Food and Agricultural Code, within 90 days after such a detection the Department is required to determine whether the pesticide residues resulted from agricultural use in accordance with state and federal laws and regulations, and to state in writing the reasons for the determination.

In order to make this determination, an investigation was conducted. Pesticide use reports for 1992-1995 were reviewed and sites were identified where hexazinone may have been used in the vicinity of the detections. In addition, assisted by the agricultural commissioner, the Pesticide Enforcement Branch investigated the areas where the contaminated wells are located to record notable observations of the locales including possible point sources (Attachment 3). They reported the existence of several agricultural pits in the two sections where the hexazinone positive wells were located. Because the pits might serve as a point source for ground water pollution (e.g., a site where empty or partially filled pesticide containers may have been dumped), a follow-up field investigation was conducted by the Environmental Hazards Assessment Program personnel on March 4, 1997 (Attachment 4). The results of that investigation showed that the pits served as collection basins for runoff water coming from nearby fields. Although hexazinone could have been moved into the pits with runoff water, there was no evidence that the pits provided a point source for ground water contamination.

Based on this investigation, the Environmental Monitoring and Pest Management Branch has determined that the hexazinone residues in well water resulted from legal agricultural use. The reasons for this determination are as follows:

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1. Hexazinone has been applied for agricultural use in the vicinity of the wells where hexazinone residues have been found in ground water.
2. There is no evidence that the residues resulted from a point source, non-agricultural use or illegal use.

We recommend that this determination be adopted by the Director as his determination.

If you have any comments or questions, please feel free to call me.



John S. Sanders, Ph.D., Chief
Environmental Monitoring and Pest
Management Branch
(916) 324-4100

Attachments

cc: Ron Oshima (w/o attachments)
Vicki Gall (w/o attachments)
Veda Federighi (w/o attachments)
Barry Cortez (w/o attachments)

Approved: _____ Date _____
James W. Wells, Director

Memorandum

To : John S. Sanders, Chief
Environmental Monitoring and
Pest Management Branch

Date : August 1, 1997

Place :

From : Department of Pesticide Regulation - 1020 N Street, Room 100
Sacramento, California 95814-5624

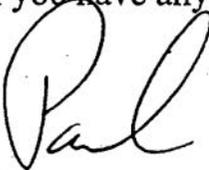
Subject : AGRICULTURAL USE DETERMINATION FOR HEXAZINONE RESIDUES
IN GROUND WATER

I reviewed your recommendation concerning hexazinone residues in ground water. Based on the evidence presented, I do not agree that the two hexazinone residues meet the criteria established in section 13149 of the Food and Agriculture Code (FAC).

You stated that the evidence showed hexazinone residues were found in the ground waters of the State due to legal agricultural use. The trace hexazinone levels raises concern about the likelihood of hexazinone's presence in the ground waters of the State; however, your subsequent investigations failed to detect any other detection of hexazinone residues.

Given trace hexazinone levels and the lack of residues in any other sample, I consider the two detections as transient and not meeting the criteria of section 13149(2) of the FAC. Your branch should continue to monitor for hexazinone residues.

If you have any questions, please contact me.



Paul H. Gosselin, Assistant Director
Division of Enforcement, Environmental
Monitoring, and Data Management
(916) 445-3984

