

**Department of Pesticide Regulation  
Environmental Monitoring and Pest Management Branch  
1020 N Street, Room 161  
Sacramento, California 95814-5624**

**March 12, 1996**

**Protocol To Determine Whether A Pesticide May Have Been Used In A Section Where It  
Has Been Detected In Ground Water (Establish Legal Agricultural Use)**

**I. Introduction**

Food and Agriculture Code (FAC) section 13 149 requires the Director to determine within 90 days of a detection whether a pesticide found in ground water or soil under certain conditions is due to agricultural use in accordance with state and federal laws and regulations. To help make that determination, the Department of Pesticide Regulation may monitor other wells and inspect the area to determine if there are possible point sources of contamination. In all cases, the Environmental Hazards Assessment Program (EHAP) determines whether the detected pesticide is used in the area. In the past, evidence of pesticide use was gathered by conducting a land use survey in the section of land where the pesticide was detected. This land use survey was conducted by EHAP staff which visited the section of land with the detection, recorded the area and location of each land use, and then prepared a map to determine the percentage of each land use in the section [see "Protocol for conducting land use surveys to establish the composition of Pesticide Management Zones (PMZs)"]. These procedures have been revised to eliminate lengthy field surveys and instead utilize pesticide use information and land use and topographical maps to determine whether or not a pesticide may have been used. These revised procedures are described in this protocol.

**II. Objectives**

The purpose of this protocol is to determine whether a pesticide may have been used in a section where a well contains pesticide residues.

**III. Personnel**

Reviews of pesticide use information and land use characteristics will be conducted by EHAP under the overall supervision of Dr. Don J. Weaver, Senior Environmental Research Scientist.

**IV. Procedures**

**A. Verification of well location**

In the past, information submitted by other agencies has occasionally placed the locations of reported contaminated wells in the wrong sections. To verify that the reported well location information is correct, EHAP staff will visit the well site and plot it by township/range-section on a copy of a U. S. Geological Survey 7 1/2 minute topological quadrangle map. At that time they will also inspect the wellhead and immediate surrounding area for signs of possible point source contamination. If point source contamination is suspected, that reported detection will be presumed to have not been the result of a legal agricultural use of the pesticide. Therefore, no further investigation of the reported detection will be carried out.

**B. Pesticide Use Information**

The Pesticide Use Report database will be queried by township/range-section for information on the pesticide in question. Information may be obtained for any year for which data are available and will include commodities treated and the amount of active ingredient applied in any year.

**C. Land Use Maps**

If there are no reports of pesticide use by section, then EHAP staff will review Department of Water Resources (DWR) Land Use Maps to determine if there are sites in the targeted section to which the detected pesticide may have been applied. DWR land use mapping surveys are conducted approximately every five years in California agricultural regions. The maps show the shape and approximate acreage of each agricultural field and any adjoining noncrop areas.

**D. Topological Maps**

If there are no reports of pesticide use by section, EHAP staff will also review U. S. Geological Survey 7 1/2 minute topological maps to identify the presence of canals, railroads, roads, and other rights-of-way in the targeted section where the detected certain pesticide may have been applied.

**E. Ground Truth Surveys**

To verify the accuracy of information gathered from land use and topological maps, a field survey will be conducted to identify land use in approximately ten percent of the sections that are evaluated. The field survey will be carried out with previously used procedures as described in the "Protocol for conducting land use surveys to establish the composition of Pesticide Management Zones (PMZs)."

**V. Evaluation And Documentation**

After all information collected from the sources described above has been evaluated, a decision will be made as to whether or not a pesticide has likely been used in a section. That information will be summarized in a memorandum pertaining to the pesticide detection which initiated the legal agricultural use investigation.

Approval: John J. Lambert  
Branch Chief

Approval: Paul H. Suss  
Assistant Director