Department of Pesticide Regulation

Brian Leahy
Director

Edmund G. Brown
Governor

California Notice 2018-05

POST UNTIL February 23, 2018

FINAL DECISION CONCERNING REEVALUATION OF DIAZINON PESTICIDES

The Director of the Department of Pesticide Regulation (DPR) files this notice with the Secretary of the California Natural Resources Agency for posting pursuant to Title 3, California Code of Regulations (CCR). Title 3 CCR requires the Secretary of the California Natural Resources Agency and DPR to post this notice for thirty (30) days for public inspection.

REEVALUATION

In February 2003, DPR commenced reevaluation of agricultural products containing the active ingredient diazinon and intended for use as dormant sprays (California Notice 2003-02). In June 2010, DPR expanded the reevaluation to include in-season uses, as well as dormant season applications. This reevaluation involves two registrants and four pesticide products. A list of products included in the reevaluation is available on DPR's Web site at <http://cdpr.ca.gov/docs/registration/reevaluation/chemicals/diazinon.htm>.

BASIS OF REEVALUATION

DPR placed diazinon into reevaluation based on monitoring studies conducted between 1991 and 2001 by the U.S. Geological Survey, Dow AgroSciences, Central Valley Reginal Water Quality Control Board (CVRWQCB), State Water Resource Control Board (SWRCB), and DPR. These studies demonstrate the presence of diazinon in the Sacramento and San Joaquin Valleys at levels that exceed the water quality criteria (WQC) established by the Department of Fish and Wildlife (DFW) (formerly known as the Department of Fish and Game), especially during the dormant spray season. DPR placed all agricultural use diazinon products into reevaluation to determine the source of surface water contamination and to examine potential mitigation measures.

Under this reevaluation, diazinon registrants were required to: (1) identify the processes by which diazinon dormant spray products are contributing to detections in surface water at levels that exceed WQC; and, (2) identify mitigation strategies that reduce or eliminate diazinon residues in surface water. With the 2010 reevaluation scope expansion to include in-season sprays, DPR required diazinon registrants to: (1) collect and evaluate all relevant (2005-2009) surface water monitoring data; and, (2) establish crop-specific mitigation measures based upon results of submitted monitoring data.

During the course of this reevaluation, DPR implemented various mitigation measures and continues to work to prevent aquatic toxicity from diazinon residues in the Sacramento and San Joaquin rivers. DPR continued to monitor the efforts of U.S. Environmental Protection Agency (U.S. EPA), SWRCB, and CVRWQCB for possible opportunities to collaborate on mitigation.

REEVALUATION SUMMARY

In July 2005, DPR approved monitoring protocols submitted by the primary manufacturer intended to evaluate the effectiveness of the proposed mitigation strategies. In September 2006, the final studies were submitted, but did not address whether diazinon registrants intended to use the information to develop and implement additional mitigation measures. Meanwhile, DPR began working on possible mitigation measures. In July 2006, DPR adopted dormant spray regulations that placed further restrictions on the use of diazinon products. These regulations require the operator of the property to follow certain practices, prohibits certain applications, and requires written recommendation from a pest control adviser before an application. By December 2006, all dormant spray diazinon product labels were amended.

In January 2007, U.S. EPA cancelled certain agricultural uses of diazinon in order to reduce risks to agricultural workers and the environment. In February 2007, DPR received a report prepared by University of California, Davis (UCD) titled, *Residues of the 2006 TMDL Monitoring of Pesticides in California's Central Valley Waterways, January–March 2006*. This study found diazinon concentrations measured during the 2006 dormant spray season were still exceeding WQC. DPR forwarded the UCD study to diazinon registrants and requested the development and implementation of further mitigation measures to reduce or eliminate diazinon residues in surface water. In February 2008, the primary manufacturer submitted two reports titled, *Analysis of Diazinon Environmental Monitoring Data from the Sacramento/Feather River Watersheds: 2001–2007* and *Project Report: Landguard OP-A as a Best Management Practice in Dormant Season Use, December 2007*. In October 2008, the primary manufacturer submitted another report titled, *Analysis of Diazinon Environmental Monitoring Data from the San Joaquin River Watershed: 2001–2007*.

In October 2009, DPR analysis of monitoring data from 2003-2008 found diazinon was detected in 637 out of 2,635 samples collected from water bodies located in the Central Valley, Central Coast, and southeastern California. As a result, on June 22, 2010, the Director expanded the reevaluation to include in-season uses, as well as dormant season applications and required additional data of diazinon registrants to better assess surface water runoff and exceedances. In March 2011, the primary manufacturer submitted a combined monitoring report for both dormant and in-season monitoring titled, *Summary of Diazinon Water Column Monitoring Data for Nine California Regions: 2005-2010*, which DPR found to be acceptable. In September 2011, DPR completed an analysis memo titled, *Analysis of Diazinon Agricultural Use in Regions of Frequent Surface Water Detections*.

Since its peak in 1993/1994, agricultural use of diazinon has been declining. Agricultural use in 2014 was only 5.4% of peak use in 1994. Likewise, there has been a general downward trend in water quality threshold exceedance frequencies. DPR has determined the current level of aquatic risk is *de minimis*. In June 2017, DPR completed an analysis of diazinon monitoring and use data titled, *A Review of Diazinon Use Contamination in Surface Waters, and Regulatory Actions in California across Water Years 1992-2014*, which was published in the journal of *Environmental Monitoring and Assessment*. DPR scientists also evaluated surface water monitoring results for 2015-2017. There have been no exceedances over the lethal concentration (LC_{50}) values for crustaceans, insects, or fish.

FINAL REEVALUATION DECISION

DPR has completed its evaluation of California diazinon use and surface water monitoring data and concluded that the use of diazinon in recent years has decreased to a level that does not pose a risk to aquatic organisms. DPR has determined no additional mitigation measures are necessary at this point. Therefore, the reevaluation is concluded.

For information on DPR's Reevaluation Program, please visit DPR's Web site at <http://cdpr.ca.gov/docs/registration/reevaluation/reevals.htm> or contact Ms. Denise Alder at <Denise.Alder@cdpr.ca.gov> or by telephone at 916-324-3522.

Original signed by Ann M. Prichard — ***January 22, 2018***

Ann M. Prichard, Chief
Pesticide Registration Branch
916-324-3931

Date

cc: Ms. Denise Alder, Senior Environmental Scientist (Specialist), DPR