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BOARD OF PESTICIDES CONTROL
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Memorandum

To: Board of Pesticides Control
From: Pamela J. Bryer, Ph.D. | Toxicologist
Subject: Milestone Special Local Need 24c Registration 2022 Review

December 2, 2022

Summary:

Aminopyralid is a low-toxicity herbicide that is unlikely to cause undue risk to people or the environment from the proposed uses in this Special Local Need, 24c, registration.

Rationale:

Aminopyralid is a reduced-risk herbicide used for controlling weedy dicots. EPA designated aminopyralid as reduced risk when it was registered in 2005 because the human health and environmental risks posed by its use are less than many other commonly used herbicides.

Aminopyralid's residence time in the environment covers an expansive range. The compound breaks down rapidly so rapidly that its half-life can be measured in hours, but only when it is in sunlight and sunlit water. In dark soil and sediment, aminopyralid can take hundreds of days to over a year to break down. This long half-life is part of the reason aminopyralid can offer residual control.

Aminopyralid is fairly soluble in water (an attribute that makes chemicals likely to leach), however, its ability to leach is variable and dependent on soil characteristics. In soil movement studies, aminopyralid largely stayed in the top portion of the soil. The maximum leaching recorded in field trials was 15 to 90 cm deep.

The primary toxic effects of aminopyralid are to terrestrial dicots, as can be expected with an herbicide. Even in simulated worst-case spill events, a tank release into a small pond, EPA found aminopyralid did not pose unacceptable risk to algae, some plants, fish, or aquatic invertebrates.

Aminopyralid is practically non-toxic to mammals and birds. Even after accounting for ingestion of grasses and seeds sprayed in the target application zone, EPA determined there would be no

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harm to birds and small mammals. In feeding and contact studies, aminopyralid was considered to be practically non-toxic to bees. Aminopyralid is classified by US EPA as Not Likely To Be Carcinogenic To Humans.

The primary focus of managing aminopyralid's non-target effect is mitigating damage to terrestrial plants due to composted materials. Aminopyralid is one of the four persistent herbicides that have been linked to many cases of damage to gardens and other plantings.

EPA issued an Interim Decision for registration renewal in 2021 (available at: <https://www.regulations.gov/document/EPA-HQ-OPP-2013-0749-0145>). Changes in the decision include enhanced measures for restricting the movement of hay, grazing animals, and manure from composting streams.

Aminopyralid is commonly used in southern and western states for pasture as can be seen in Figure 1.

There are tolerances set for aminopyralid based on its use on wheat and pasture. These details can be found at: https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=1&SID=b069684783771469b656e65a48e2a7df&ty=HTML&h=L&mc=true&r=SECTION&n=se40.26.180_1610

Source documents:

Aminopyralid Fact Sheet. Issued August 10, 2005. US EPA Office of Prevention, Pesticides. Available at: https://www3.epa.gov/pesticides/chem_search/reg_actions/registration/fs_PC-005100_10-Aug-05.pdf

Preliminary Problem Formulation for the Environmental Fate and Ecological Risk, Endangered Species, and Human Health Drinking Water Exposure for Aminopyralid, Potassium salt of Aminopyralid, and Triisopropanolamine Salt of Aminopyralid. Issued February 12, 2014. US EPA Office of Pesticide Programs, Environmental Fate and Effects Division. Available at: <https://www.regulations.gov/document?D=EPA-HQ-OPP-2013-0749-0011>

Addendum to the Problem Formulation for the Environmental Fate and Ecological Risk, Endangered Species, and Drinking Water Assessments in Support of the Registration Review of Aminopyralid Regarding Tier I Honey Bee Toxicity Testing. Issued September 3, 2014. US EPA Office of Chemical Safety and Pollution Prevention. Available at: <https://www.regulations.gov/document?D=EPA-HQ-OPP-2013-0749-0044>

Aminopyralid Human Health and Ecological Risk Assessment -Final Report. Prepared for USDA/Forest Service and National Park Service. Issued June 28, 2007. Prepared by Syracuse Environmental Research Associates Inc., Fayetteville, New York. SERA TR-052-04-04a. Available at: https://www.fs.usda.gov/nfs/11558/www/nepa/101135_FSPLT3_2537846.pdf

Aminopyralid Estimated Agricultural Use. National Water-Quality Assessment (NAWQA) Project. USGS Website. Accessed July 7, 2020. Available at: https://water.usgs.gov/nawqa/pnsp/usage/maps/show_map.php?year=2017&map=AMINOPYRALID&hilo=L&disp=Aminopyralid

Figure 1. Data organized by USGS for estimating agricultural uses of aminopyralid in the US.

