

Comments to Ecology for APAM permit

From Allan B. Chartrand, DABT, toxicologist

I have reviewed a summary of the APAM permit modification proposed by Ecology for aminopyralid and suggest strengthened language concerning use of the herbicide aminopyralid related to the modified aquatic permit. Aminopyralid is normally used for grasses, shrubs, and other terrestrial plants, and there are no current or proposed in-water registrations for aminopyralid nationally, and current registrations only address applications to the water body's edge. This is important because overspray, drift, and/or surface water runoff could potentially cause non-target effects at any adjoining surface water body, especially sensitive aquatic plants. This has been demonstrated in other locations. Aminopyralid herbicides are not significantly toxic to aquatic life such as fish or invertebrates, but are toxic to many forms of plants, including sensitive aquatic or wetland species, and extra caution should be spelled out to mitigate or prevent these types of non-target effects.

It is noted that an aquatic aminopyralid registration would expand the utility of aminopyralid-containing herbicides by allowing control of invasive or other weedy plant species along shorelines or banks of water bodies, but any new label should not include control of submersed aquatic plants. According to label specifications, aminopyralid should not or cannot be applied around or directly to wetlands, drainage areas, lakes, ponds, shorelines, rivers and other sensitive aquatic areas. Carefully applied buffer zones around aquatic areas and water bodies must be implemented to avoid off-site transport such as drift, runoff, or overspray.

This level of caution is due to aminopyralid studies from the UK and elsewhere. Due to non-target considerations, aminopyralid was suspended from use in the UK from 2008-2009 due to non-target associated with the use of aminopyralid-contaminated animal manure. Crops were reportedly damaged by aminopyralid, which is quite persistent (in surface soil, EPA reported a half-life of 103 days and in topsoil a half-life of 72 days; EPA OPPTS, 2005). In 2009, use of aminopyralid was reinstated in the UK after the registrant initiated an aminopyralid stewardship program on how to address contaminated animal manures. This highlights the importance of assuring that aminopyralid or other persistent herbicides would not be allowed to cause non-target exposures via manure or other pathways to susceptible plant or animal species.

Therefore, any proposed labeled use of aminopyralid should not include banks of irrigation ditches or aquatic applications for submersed aquatic plant control or related applications. When treating areas with aminopyralid herbicides in and around roadside or utility rights-of-way that could be grazed or planted to forage, label precautions would be recommended regarding harvesting hay, using manure from animals grazing on treated areas, or rotating treated areas to sensitive crops.

With regard to effects to ESA-listed species, especially plants, aminopyralid is relatively persistent in soils and sediments, which is part of critical habitat, and therefore this should be considered when applying aminopyralid herbicides to areas where critical aquatic habitat is present. Aminopyralid can be toxic to non-target plant species, which may be part of critical habitat requiring protection under ESA requirements. If such plants are present for aquatic plant control projects, the permit should require a plant survey and implementation of mitigation measures if any rare or vulnerable plant species is identified.

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Both short- and long-term post-treatment monitoring should be required for the purpose of evaluating non-target effects from a toxic herbicide such as aminopyralid. It is believed that this post-treatment monitoring would be required under their APAM and/or NPDES discharge permit, and serve as a permit condition requiring monitoring to determine potential non-target impacts.

Reference

US Environmental Protection Agency (EPA). Office of Prevention, Pesticides, and Toxic Substances (OPPTS). 2005. Pesticide Fact Sheet. Conditional Registration: Aminopyralid. August 10.

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