UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

October 23, 2008

Dear Registrant:

The Environmental Protection Agency (Agency) signed the Reregistration Eligibility Decision (RED) document for imazapyr on June 14, 2006 (see docket EPA-HW-OPP-2005-0495). The imazapyr RED describes label requirements for Manufacturing Use Products (MUPs) and End Use Products (EUPs). These label requirements must be implemented during imazapyr's product reregistration process, which is currently taking place.

During this product registration process, the Agency found that environmental hazard label language in the RED is inconsistent with the uses of imazapyr products. Although MUPs are not applied to any aquatic or terrestrial site, the original RED environmental hazard requirements for MUPs referenced application of the pesticide. The Agency is therefore revising these requirements to address potential human health and environmental impacts resulting from the manufacturing process (e.g. pollution discharge). The Agency believes that the revised MUP environmental hazard requirements are more protective of human health and the environment.

Additionally, because certain imazapyr EUPs may be applied to aquatic sites exclusively, non-aquatic sites exclusively, or both aquatic and non-aquatic sites, the Agency is revising RED environmental hazard label requirements to make distinctions among these use patterns. The Agency believes that the revised mitigation language will clarify use directions for aquatic and non aquatic uses of imazapyr.

The Agency's revisions to the imazapyr RED label language are listed below, and are consistent with the Agency's Label Review Manual (http://www.epa.gov/oppfead1/labeling/lrm/). The revised environmental hazard language is also included in a comprehensive listing of RED label requirements in Table 1.

1. **Manufacturing Use Product (MUP) Environmental Hazards Statement:**

   a. "This product is toxic to plants. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollution Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA."

2. **End Use Product (EUP) Environmental Hazards Statements (occupational and residential):**

   a. <u>For products ONLY applied to non-aquatic use sites:</u>
   "This product is toxic to plants. Drift and run-off may be hazardous to plants in water adjacent to treated areas. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. See Directions for Use for additional precautions and requirements."

   b. <u>For products ONLY applied to aquatic sites:</u>
   "This product is toxic to plants. Drift and run-off may be hazardous to plants in water adjacent to treated areas. Treatment of aquatic weeds can result in oxygen loss from decomposition of dead weeds. This loss can cause fish suffocation. Therefore, to minimize this hazard, treat 1/3 to 1/2 of the water area in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Do not contaminate water when disposing of equipment, washwater, or rinsate. See Directions for Use for additional precautions and requirements."

   c. <u>For products possibly applied to both aquatic and non-aquatic sites (same as the original language in imazapyr RED label table):</u>
   "This product is toxic to plants. Drift and run-off may be hazardous to plants in water adjacent to treated areas. Do not apply to water except as specified on the label. Treatment of aquatic weeds may result in oxygen depletion or loss due to decomposition of dead plants. Do not treat more than one half the surface area of the water in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outward in bands to allow aquatic organisms to move into untreated areas. Do not contaminate water when disposing of equipment, washwater, or rinsate. See Directions for Use for additional precautions and requirements."

If you have questions on the imazapyr RED or any of the revisions listed above, please contact the Chemical Review Manager, Melanie Biscoe at (703) 305-7106 or biscoe.melanie@epa.gov. For questions about product reregistration, please contact Julia Stokes in the Product Review Branch at 703-347-8966 or stokes.julia@epa.gov.

Sincerely,

Steven Bradbury, Ph.D.
Director
Special Review and Reregistration Division

Table 1. Revised Label Requirements for Imazapyr Products

Description	Amended Labeling Language	Placement on Label
For all Manufacturing Use Products	"Only for formulation into an ***herbicide*** for the following uses: liquid, wettable powder (in water soluble bags only), and granular." "Not for formulation into wettable powder end use products unless they are packaged in water soluble bags."	Directions for Use
One of these statements may be added to a label to allow reformulation of the product for a specific use or all additional uses supported by a formulator or user group	"This product may be used to formulate products for specific use(s) not listed on the MP label if the formulator, user group, or grower has complied with U.S. EPA submission requirements regarding support of such use(s)." "This product may be used to formulate products for any additional use(s) not listed on the MP label if the formulator, user group, or grower has complied with U.S. EPA submission requirements regarding support of such use(s)."	Directions for Use
Environmental Hazards	"This product is toxic to plants. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollution Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA."	Precautionary Statements

End Use Products for Occupational Use (WPS and non-WPS)		
PPE Requirements Established by the RED[1] For All Formulations	"Personal Protective Equipment (PPE) Some materials that are chemical-resistant to this product are" (*registrant inserts correct chemical-resistant material*). "If you want more options, follow the instructions for category" *[registrant inserts A,B,C,D,E,F,G, or H]* "on an EPA chemical-resistance category selection chart." "Mixers, loaders, applicators, and other handlers must wear: > Long-sleeve shirt and long pants, > Shoes plus socks, > Chemical resistant gloves for all mixers and loaders, plus applicators using handheld equipment."	Precautionary Restrictions
User Safety Requirements	"Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them."	Immediately following the PPE requirements
Engineering controls for Products Applied Aerially as Sprays	"Pilots must use an enclosed cockpit that meet the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]."	Immediately following the User Safety Requirements

User Safety Recommendations	"User Safety Recommendations Users should wash hands with plenty of soap and water before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing."	Immediately following Engineering Controls (Must be placed in a box.)
Environmental Hazards	<u>For products ONLY applied to non-aquatic use sites:</u> "This product is toxic to plants. Drift and run-off may be hazardous to plants in water adjacent to treated areas. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. See Directions for Use for additional precautions and requirements." <u>For products ONLY applied to aquatic sites:</u> "This product is toxic to plants. Treatment of aquatic weeds can result in oxygen loss from decomposition of dead weeds. This loss can cause fish suffocation. Therefore, to minimize this hazard, treat 1/3 to 1/2 of the water area in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Do not contaminate water when disposing of equipment, washwater, or rinsate. See Directions for Use for additional precautions and requirements."	Precautionary Statements immediately following the User Safety Recommendations

	For products that may be applied to both aquatic and non-aquatic sites: "This product is toxic to plants. Drift and run-off may be hazardous to plants in water adjacent to treated areas. Do not apply to water except as specified on the label. Treatment of aquatic weeds may result in oxygen depletion or loss due to decomposition of dead plants. Do not treat more than one half the surface area of the water in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outward in bands to allow aquatic organisms to move into untreated areas. Do not contaminate water when disposing of equipment, washwater, or rinsate. See Directions for Use for additional precautions and requirements."	
Restricted-Entry Interval for products with directions for use within scope of the Worker Protection Standard for Agricultural Pesticides (WPS)	"Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours."	Directions for Use, In Agricultural Use Requirements Box

Entry Restrictions for Products with Directions for Use not Within the Scope of WPS	For products applied as Sprays: "Do not enter or allow others to enter treated areas until sprays have dried" For products applied as Dry: "Do not enter or allow others to enter treated areas until dusts have settled."	
Early Entry Personal Protective Equipment for products with directions for use within the scope of the WPS	"PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: * coveralls * shoes plus socks * chemical-resistant gloves made of any waterproof material * protective eyewear"	Direction for Use, In Agricultural Use Requirements box, immediately following the REI
General Application Restrictions	"Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application."	Place in the Direction for Use directly above the Agricultural Use Box.
Spray Drift	<u>Spray drift requirements</u> <u>Aerial Applications:</u> (1) Applicators are required to use a Coarse or coarser droplet size (ASABE S572) or, if specifically using a spinning atomizer nozzle, applicators are required to use a volume mean diameter (VMD) of 385 microns or greater for release heights below 10 feet; Applicators are required to use a Very Coarse or coarser droplet size or, if specifically using a spinning atomizer nozzle, applicators are required to use a VMD of 475 microns or greater for release heights above 10 feet; Applicators must consider the effects of nozzle orientation and flight speed when determining droplet size.	Directions for Use

	(2) Applicators are required to use upwind swath displacement. (3) The boom length must not exceed 60% of the wingspan or 90% of the rotor blade diameter to reduce spray drift. (4) Applications with wind speeds less than 3 mph and with wind speeds greater than 10 mph are prohibited. (5) Applications into temperature inversions are prohibited. <u>Ground Boom Applications:</u> (1) Applicators are required to use a nozzle height below 4 feet above the ground or plant canopy and Coarse or coarser droplet size (ASABE S572) or, if specifically using a spinning atomizer nozzle, applicators are required to use a volume mean diameter (VMD) of 385 microns or greater. (2) Applications with wind speeds greater than 10 mph are prohibited. (3) Applications into temperature inversions are prohibited.	
	The use of treated waters on irrigated crops within 120 days of treatment is prohibited.	

End Use Products Primarily Intended for Residential Use		
Environmental Hazard Statements	For products ONLY applied to non-aquatic use sites: "This product is toxic to plants. Drift and run-off may be hazardous to plants in water adjacent to treated areas. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. See Directions for Use for additional precautions and requirements." For products ONLY applied to aquatic sites: "This product is toxic to plants. Treatment of aquatic weeds can result in oxygen loss from decomposition of dead weeds. This loss can cause fish suffocation. Therefore, to minimize this hazard, treat 1/3 to 1/2 of the water area in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Do not contaminate water when disposing of equipment, washwater, or rinsate. See Directions for Use for additional precautions and requirements." For products that may be applied to both aquatic and non-aquatic sites: "This product is toxic to plants. Drift and run-off may be hazardous to plants in water adjacent to treated areas. Do not apply to water except as specified on the label. Treatment of aquatic weeds may result in oxygen depletion or loss due to decomposition of dead plants. Do not treat more than one half the surface area of the water in a single operation and wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outward in bands to allow aquatic organisms to move into untreated areas. Do	Precautionary Statements immediately following the User Safety Recommendations

	not contaminate water when disposing of equipment, washwater, or rinsate. See Directions for Use for additional precautions and requirements."	
Entry Restrictions for products applied as a spray	For products applied as Sprays: "Do not enter or allow others to enter treated areas until sprays have dried" For products applied as Dry: "Do not enter or allow others to enter treated areas until dusts have settled."	Directions for use under General Precautions and Restrictions
General Application Restrictions	"Do not apply this product in a way that will contact any person, pet, either directly or through drift. Keep people and pets out of the area during application."	Directions for Use under General Precautions and Restrictions

[1] PPE that is established on the basis of Toxicity of the end-use product must be compared to the active ingredient PPE in this document. The more protective PPE must be placed in the product labeling. For guidance on which PPE is considered more protective, see PR Notice 93-7.

[2] If the product contains oil or bears instructions that will allow application with an oil-containing material, the AN@ designation must be dropped