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

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OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: ID# 000264-00002. Review of label amendment for 2,4-D (Weedar 64 Broadleaf Herbicide). MRID# 429685-01 to -06. Barcode D196246. Case 004870. CBTS# 12765.

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TO: JoAnne Miller, Product Manager
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Rhône-Poulenc is proposing a label amendment for Weedar 64 (2,4-D) for aquatic uses on water milfoil. Tolerances for 2,4-D in fish (1.0 ppm) in the Tennessee Valley Authority (TVA) are established under 40 CFR § 180.143(i), in irrigated crops (0.1 ppm) under 40 CFR § 180.143(c), and in potable water in the TVA under 40 CFR § 185.1850(3)(iii). The current label limits use on water milfoil to the TVA system. The registrant has requested to remove this restriction in order to allow use throughout the U.S. The maximum use rate on water milfoil (38 lbs. ai/A) is almost 10X the maximum use rate on water hyacinth (4 lbs. ai/A). The use on water hyacinth is not restricted geographically and 2,4-D residues in fish and shellfish resulting from this use are covered under 40 CFR § 180.143(f).

CONCLUSIONS/RECOMMENDATIONS

CBTS recommends against the proposed label amendment for use of 2,4-D on water milfoil because the existing tolerance expression would not cover 2,4-D residues in fish and shellfish as a result of



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water milfoil programs outside TVA. In order for CBTS to further consider this label amendment, the registrant must submit a petition to change the 2,4-D tolerances for fish and shellfish to cover residues resulting from water milfoil programs outside TVA. The data and label changes needed for such a petition are discussed in more detail below.

DETAILED CONSIDERATIONS

The current Weedar label allows a maximum application rate of 38 lbs. ai/A for water milfoil. Treatment is not permitted within $\frac{1}{4}$ mile of potable water intakes. The use of treated water for irrigation or domestic purposes (potable) is to be delayed for 3 weeks or until an approved assay shows the water to contain no more than 0.1 ppm 2,4-D. The use on water milfoil is limited to programs conducted by the TVA in dams and reservoirs in the TVA system. The registrant is seeking to remove this geographic restriction. However, the current tolerances for residues of 2,4-D in fish as a result of use in water milfoil programs is limited in 40 CFR § 180.143(i) to dams and reservoirs of the TVA system. No existing tolerance covers 2,4-D residues in shellfish as a result of use in water milfoil programs. CBTS thus recommends against removing the geographic label restriction as the existing tolerances would not cover 2,4-D residues in fish and shellfish as a result of water milfoil programs outside TVA. In order for CBTS to further consider this label amendment, the registrant must submit a petition to change the 2,4-D tolerances for fish and shellfish to cover residues resulting from water milfoil programs outside TVA.

CBTS notes that the nature and magnitude of the residues of 2,4-D in fish, shellfish and irrigated water are not considered to be understood (2,4-D Residue Chemistry Chapter, 2/5/88). Based on the registrant's Data Reference List, a pending fish metabolism study is due 12/31/94. An extension of this due date has been requested. The registrant will thus need to submit studies on the nature and magnitude of the residues of 2,4-D in fish, shellfish and irrigated water in order for CBTS to consider any petition to change the 2,4-D tolerances for fish and shellfish to cover residues resulting from water milfoil programs outside TVA. Also, the current TVA restriction limits use to dams and reservoirs. The general instructions for aquatic use of Weedar permit applications to "ponds, lakes, reservoirs, marshes, bayous, drainage ditches, canals, rivers and streams that are quiescent or slow moving." Thus, the removal of the TVA restriction will expand use from dams and reservoirs to ponds, lakes, etc. The higher application rate for water milfoil in these smaller and flowing bodies of water may result in greater 2,4-D residues in fish and irrigation water than

would result from use in dams and reservoirs. If the intent of the registrant is to include use in small and slow moving bodies of water (i.e., canals, ponds, drainage ditches, etc.), then the petition should include residue data from use in such bodies of water or a label restriction to permit use only in dams and reservoirs should be added.

We have previously determined that the high use rate applications in water milfoil programs necessitates that this use be restricted to programs conducted by federal, state or local public agencies (Memo, R. Perfetti, 11/16/83). This restriction should be added to the directions for use for water milfoil. The current label does not specify a retreatment interval. A retreatment interval should thus be added to the directions for use for water milfoil. Also, the time restrictions against using treated water for irrigation and domestic purposes are not practical and should be deleted. The statement which restricts against treatment within $\frac{1}{2}$ mile of potable water intakes should be revised to include irrigation water intakes. If the residue data indicate that 2,4-D residues in excess of 0.1 ppm are found at water intakes, then further restrictions may be required if practical. For instance, use on bodies of water used for irrigation could be prohibited. For potable water, use could be restricted to cases where alternative water sources or holding ponds would permit the turning off of water intakes for the required period of time.

The registrant has submitted a number of studies pertaining to aquatic uses of 2,4-D. CBTS has examined these studies and will comment on their pertinence to any future petition to expand the use of 2,4-D for water milfoil.

MRID# 429685-01: This document contains three studies conducted by the Army Corps of Engineers. The first study (Barry, J.R. 1981) contains the results of water monitoring from water hyacinth programs. These data are not relevant to water milfoil programs due the difference in use rates. The second study (Kilgore, K.J. 1984) evaluated the effect of adjuvants on 2,4-D efficacy in water milfoil trial programs conducted on a lake and river in WA. Since monitoring of water was conducted, these data may be relevant to a petition to expand the use of 2,4-D for water milfoil. The third study (Rodgers, J.H., et. al 1992) contains the results of residue monitoring in water, fish and shellfish in conjunction with water milfoil programs in the TVA. The data for water and shellfish may be relevant to a petition to expand the use of 2,4-D for water milfoil but the data for fish are not applicable since the residues were measured in whole fish, not edible tissues.

MRID# 429685-02: This document contains three miscellaneous studies on the persistence of 2,4-D in aquatic environments. The first study (Bothwell, M.L. and Daley, R.J., 1981) was conducted on the persistence and transport of 2,4-D during water milfoil

programs in B.C., Canada. It is unlikely that these data could be used to support a petition to expand the use of 2,4-D for water milfoil since the trials were conducted outside of the U.S. and the 2,4-D formulation utilized (Aqua-Kleen 20, butoxyethanol ester of 2,4-D) differs considerably from the Weedar formulation. The second study (Joyce, J.C. and Ramey, V. 1986) is a literature review on aquatic herbicide residues and thus contains no data. The third study (King, J.M., 1991) reports the effects on indigenous biota of 2,4-D from water milfoil programs in a KY reservoir of the TVA. The residue data for water may be relevant to a petition to expand the use of 2,4-D for water milfoil.

MRID# 429685-03: This document contains reprints of journal articles pertaining to the dissipation of 2,4-D residues in water and the effects of 2,4-D on nontarget aquatic species. The use of open literature to support a petition to expand the use of 2,4-D for water milfoil would be questionable as such studies do not generally meet the data storage requirements of 40 CFR § 169.2(k).

MRID# 429685-04: This document contains studies on the persistence of 2,4-D in water and tissues during water milfoil programs in B.C., Canada. It is unlikely that these data could be used to support a petition to expand the use of 2,4-D for water milfoil since the trials were conducted outside of the U.S. and the 2,4-D formulation utilized (Aqua-Kleen 20, butoxyethanol ester of 2,4-D) differs considerably from the Weedar formulation.

MRID# 429685-05: This document contains three Masters Theses from Washington State U. on 2,4-D used on water milfoil. The first thesis (Durando-Boehm 1983) investigated the ability of 2,4-D to control water milfoil on the Pend Oreille River in WA when combined with adjuvants. The residue data for water may be relevant to a petition to expand the use of 2,4-D for water milfoil. The second thesis (Eisenbeis, J.J. 1983) investigated the accumulation of ¹⁴C-2,4-D when combined with adjuvants and applied to water milfoil on the Pend Oreille River in WA. The residue data for water may be relevant to a petition to expand the use of 2,4-D for water milfoil. The third thesis (Verhalen, F.A. 1984) investigated the response of insects to 2,4-D when applied to water milfoil. This study appears to have little relevance to the residue chemistry issues of a petition to expand the use of 2,4-D for water milfoil.

MRID# 429685-06: This volume contains the results of water monitoring from water hyacinth programs in the Sacramento Delta. These data are not relevant to water milfoil programs due the difference in use rates.

The registrant should note that in order for any of these studies to be used to support a petition to expand the use of 2,4-D for water milfoil, detailed descriptions of the protocols and

analytical methods (including validation data and representative chromatograms) employed must be included. Also, the raw data must be available for a data integrity audit as specified in 40 CFR § 169.2(k). The GLP statements, as required by 40 CFR § 160, state that the submitter does not know whether the studies were done in accordance with 40 CFR § 160.

cc: S.F., Kramer, circ., R.F., PP#3E2876
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