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Reconsideration of Conditional Registration of Treflan E.C. for use on Field Corn, Sorghum and Barley Reg. No. 1471-35.

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TS-769/CM#2/Rm.807/557-7484

In response to your verbal request concerning the above subject, the Ecological Effects Branch has reconsidered the proposed conditional registration but agrees with the conclusion in the 2/7/80 review not to concur; additional information is necessary to complete a hazard assessment. However, in lieu of the previously requested studies, EEB has determined the following to be more appropriate:

1. An aquatic invertebrate acute toxicity study on a freshwater mussel (i.e. Elliptio complanatus or similar species).

2. A field monitoring study on a field corn, sorghum and/or barley agricultural field and drainage; this monitoring will include the following:

   a. Monitoring of the fish population density and fish residues (trifluralin and major metabolites or degradates) in edible and inedible parts from fish in receiving waters;

   b. Continuous rainfall monitoring for treated fields;

   c. Monitoring of flow-off of the treated area per rainfall event;

   d. Monitoring of concentrations of trifluralin and major metabolites or degradates in runoff water per rainfall event;

   e. Monitoring of concentrations of trifluralin and major metabolites or degradates in sediment by weight (total kg/runoff event);

   f. Monitoring of concentrations of trifluralin and major metabolites or degradates in receiving waters and bottom sediment;

   g. Percent soil cover monitoring by month;

   h. Daily pan evaporation monitoring; and

   i. Pathologic investigation of selected fish in receiving waters.

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Questions concerning (b) through (h) should be directed to Charles Smith, LOA, Athens, GA.

The Ecological Effects Branch considers these studies necessary for the following reasons:

1. Trifluralin has been shown to be highly bioconcentrated in fish (4200-11,500x) and in a mollusc (153,000x).

2. Trifluralin is highly soil bound and can be expected to reach aquatic environments through soil runoff.

3. Trifluralin may be highly persistent in aquatic environments because sediment bound residues do not degrade readily but may be slowly desorbed yielding low-level chronic exposures to aquatic populations.

4. Trifluralin is chronically toxic to fish at extremely low levels, 1-3 ppb and perhaps less.

5. Field monitoring studies on cotton plots have indicated chronically toxic residues of trifluralin in receiving ponds.

6. No toxicity information is available for aquatic molluscs, with many important and endangered molluscs in the corn-belt use area. A possible hazard is indicated by the high bioconcentrating abilities of these animals.

Leslie Touart