8-14-95

DP Barcodes: D214344,D215969
PC Code No: 129081
EEB Out:

To: Joanne Miller/Dianne Morgan
Product Manager 23
Registration Division (7505C)

From: Anthony F. Maciorowski, Chief
Ecological Effects Branch/EFED (7507C)

Attached, please find the EEB review of...

Reg./File # : 279-GRUO
Chemical Name : Sulfentrazone
Type Product : Herbicide
Product Names : Sulfentrazone Technical
Company Name : FMC Corporation
Purpose : Toxicity data - new chemical
Action Code : 011,101 Dates Due : 6/30/95, 8/15/95
Reviewer : W. Erickson Dates In : 7/26-27/95

EEB Guideline/MRID Summary Table: The review in this package contains an evaluation of the following:

Gdln No.	MRID No.	Cat.	Gdln No.	MRID No.	Cat.	Gdln No.	MRID No.	Cat.
71-1(a)			72-2(a)			72-7(a)		
71-1(b)			72-2(b)			72-7(b)		
71-2(a)			72-3(a)	435886-02	Y	122-1(a)		
71-2(b)			72-3(b)			122-1(b)		
71-3			72-3(c)	435886-03	Y	122-2		
71-4(a)			72-3(d)			123-1(a)		
71-4(b)			72-3(e)			123-1(b)		
71-5(a)			72-3(f)			123-2	436510-04 436510-05 436510-06 436510-07	Y Y S Y
71-5(b)			72-4(a)	435886-04	Y	124-1		
72-1(a)			72-4(b)	435886-05	Y	124-2		
72-1(b)			72-5			141-1		
72-1(c)			72-6			141-2		
72-1(d)						141-5		

Y=Acceptable (Study satisfied Guideline)/Concur
S=Supplemental (Study provided useful information but Guideline was not satisfied)
N=Unacceptable (Study was rejected)/Nonconcur

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Sulfentrazone: review of toxicity data

FROM: Anthony F. Maciorowski, Chief
Ecological Effects Branch
Environmental Fate and Effects Division (7507C)

TO: Joanne Miller/Dianne Morgan
Product Manager 23
Registration Division (7505C)

FMC Corporation, Princeton, NJ, submitted the toxicity studies cited below. EEB has reviewed the studies and the DERs are attached.

Boeri, R.L., J.P. Magazu, and T.J. Ward. 1994. F6285 technical: acute toxicity to the silverside, *Menidia beryllina*. Conducted by T.R. Wilbury Laboratories, Inc., Marblehead, MA. Wilbury Report No. 495-FM. MRID No. 435886-02.

Comments: The study satisfies the guideline requirement (72-3a) for an acute marine/estuarine fish toxicity test. The 96-h LC_{50} value of 114 ppm classifies technical sulfentrazone as practically nontoxic to marine/estuarine fish.

Boeri, R.L., J.P. Magazu, and T.J. Ward. 1994. F6285 technical: acute toxicity to the mysid, *Mysidopsis bahia*. Conducted by T.R. Wilbury Laboratories, Inc., Marblehead, MA. Wilbury Report No. 494-FM. MRID No. 435886-03.

Comments: The study satisfies the guideline requirement (72-3c) for an acute marine/estuarine shrimp toxicity test. The 96-h LC_{50} value of 1 ppm classifies technical sulfentrazone as highly toxic to marine/estuarine invertebrates.

Boeri, R.L., J.P. Magazu, and T.J. Ward. 1994. Early life-stage toxicity of F6285 technical to the rainbow trout, *Oncorhynchus mykiss*. Conducted by T.R. Wilbury Laboratories, Inc., Marblehead, MA. Wilbury Report No. 308-FM. MRID No. 435886-04.

Comments: The study satisfies the guideline requirement (72-4a) for a fish early life-stage study. The most sensitive endpoints were the number of survivors and fish length 60 days post hatch. The NOEC is 2.95 ppm and the LOEC is 5.93 ppm.

Boeri, R.L., P.L. Kowalski, and T.J. Ward. 1994. Chronic toxicity of F6285 technical to the daphnid, *Daphnia magna*. Conducted by T.R. Wilbury Laboratories, Inc., Marblehead, MA. Wilbury Report No. 309-FM. MRID No. 435886-05.

Comments: The study satisfies the guideline requirement (72-4b) for an aquatic invertebrate life-cycle study. The most sensitive endpoint was survival. The NOEC is 0.20 ppm and the LOEC is 0.51 ppm.

Boeri, R.L., P.L. Kowalski, and T.J. Ward. 1994. Acute toxicity of sulfentrazone technical to the freshwater alga, *Navicula pelliculosa*. Conducted by T.R. Wilbury Laboratories, Inc., Marblehead, MA. Wilbury Report No. 618-FM. MRID No. 436510-04.

Comments: The study satisfies the guideline requirement (123-2) for a Tier 2 aquatic plant growth study with a freshwater diatom. The 120-h EC_{50} is 42.1 ppb.

Ward, T.J., P.L. Kowalski, and R.L. Boeri. 1995. Toxicity of sulfentrazone technical to the duckweed, *Lemna gibba* G3. Conducted by T.R. Wilbury Laboratories, Inc., Marblehead, MA. Wilbury Report No. 620-FM. MRID No. 436510-05.

Comments: The study satisfies the guideline requirement (123-2) for a Tier 2 aquatic plant growth study with a freshwater diatom. The 14-day EC_{50} is 28.8 ppb.

Ward, T.J., P.L. Kowalski, and R.L. Boeri. 1995. Acute toxicity of sulfentrazone technical to the freshwater alga, *Anabaena flos-aquae*. Conducted by T.R. Wilbury Laboratories, Inc., Marblehead, MA. Wilbury Report No. 617-FM. MRID No. 436510-06.

Comments: The study (guideline 123-2) is supplemental, because an NOEC was not determined. However, because an EC_{50} was established, the study does not need to be repeated. The 120-h EC_{50} is 32.8 ppm.

Ward, T.J., P.L. Kowalski, and R.L. Boeri. 1995. Acute toxicity of sulfentrazone technical to the marine alga, *Skeletonema costatum*. Conducted by T.R. Wilbury Laboratories, Inc., Marblehead, MA. Wilbury Report No. 619-FM. MRID No. 436510-07.

Comments: The study satisfies the guideline requirement (123-2) for a Tier 2 aquatic plant growth study with a marine diatom. The 120-h EC_{50} is 1.8 ppm.

If you have any questions, please contact Bill Erickson at 305-6212 or Harry Craven at 305-5320.