EEB file

190425
RECORD NO.

121001
SHAUGHNESSEY NO.

17
REVIEW NO.

EEB REVIEW

DATE: IN 3-25-87 OUT 3/31/87

FILE OR REG. NO 87-WA-04

PETITION OR EXP. NO.

DATE OF SUBMISSION 2-26-87

DATE RECEIVED BY HED 3-23-87

RD REQUESTED COMPLETION DATE 4-06-87

EEB ESTIMATED COMPLETION DATE 4-06-87

RD ACTION CODE/TYPE OF REVIEW 510

TYPE PRODUCT(S) : I, D, H, F, N, R, S Herbicide

DATA ACCESSION NO(S).

PRODUCT MANAGER NO. Stubbs (41)

PRODUCT NAME(S) Sethoxydim (Poast)

COMPANY NAME State of Wasington

SUBMISSION PURPOSE Section 18 for use of Poast in cannery (green) peafields

SHAUGHNESSEY NO.	CHEMICAL, & FORMULATION	% A.I.
121001	Sethoxydim	

EEB REVIEW

100.0 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

The Department of Agriculture for the State of Washington is requesting to renew a section 18 emergency exemption which was granted in 1985 and 1986.

This systemic post emergence herbicide will be applied one time from April 1, 1987 through July 1, 1987 to control grass weeds in green pea fields. A total of 2500 acres will be treated in the following counties:

Clark	Thurston
Cowlitz	Skagit
Grays Harbor	Snohomish
Lewis	Whatcom

100.2 Formulation and Information

Active Ingredient:
Sethoxydim* 18%
Inert Ingredients 82%

One gallon contains 1.5 lb ai.

100.3 Application Methods, Directions, Rates

Poast will be applied by aerial equipment at a rate of 0.28 lb ai/A over 2500 acres in Western Washington. One treatment will be limited to April 1, 1987 through July 1, 1987. A maximum of 700 lbs ai (sethoxydim) or 470 gallons of formulated product (Poast) will be used to control grassy weeds.

100.4 Target Organisms

annual ryegrass, Lolium multiflorum

barnyard grass, Echinochloa crusgalli

100.5 Precautionary Labeling

No Environmental Hazard Labeling was included with the submission.

101.0 Hazard Assessment

101.1 Discussion

Directly following a single application rate of 0.28 lb ai/A, the followng maximum residue concentrations are anticipated:

Surface	Maximum residue (ppm)
short grass	68
long grass	31
leafy crops	35
forage alfalfa and insects	16
seed pods	3
fruit	1.7
Top 6" of water (after direct application)	205 ppb
Top 6" of soil (after direct application)	6.1
Aquatic EEC	8.5 ppb

101.2 Likelihood of Adverse Effects on Nontarget Organismsm

Avian Species

The available avian toxicity data indicates sethoxydim is practically non-toxic to waterfowl (mallard LD50 > 2,000 mg/kg) on an acute oral basis. This chemical is also practically non-toxic to both upland game birds and waterfowl (mallard and bobwhite LC50 > 5,000 ppm) on a dietary basis.

Mammalian Species

The available mammalian toxicity data indicates sethoxydim is practically non-toxic to mammals on an acute oral basis (Rat LD50 > 2,000 mg/kg and Mice LD50 > 5,000 mg/kg).

Aquatic Species

Sethoxydim is practically non-toxic to freshwater fish (Bluegill LC50 = 265 ppm and rainbow trout LC50 = 170 ppm) and slightly toxic to aquatic invertebrates (*Daphnia magna* LC50 = 78 ppm).

Environmental Fate

Sethoxydim has a half-life of < 4 days in soil and water (< 1 day in direct sunlight). (See EEB Review, Charles Lewis, 2-12-87). The Estimated Environmental Concentration is expected to be 8.5 ppb (see Attachment A for calculations).

Exposure

Avian Species

Based on the estimated exposure and the available avian toxicty data, sethoxydim is not expected to pose a hazard to avian wildlife. The maximum expected exposure of short range grass (68 ppm) is well below both the endangered species trigger (1/10th LC50 > 500 ppm) and the restricted use trigger (1/5th LC50 > 1,000 ppm).

Aquatic Species

Based on the estimated exposure and the available aquatic toxicty data, sethoxydim is not expected to pose a hazard to aquatic organisms. The maximum expected exposure, even after direct application - 205 ppb, is well below both the endangered species trigger (1/20th LC50 = 3.9 ppm) and the restricted use trigger (1/10th LC50 = 7.8 ppm) for aquatic organisms. In this case, EEB used the LC50 for the most sensitive aquatic organisms, Daphnia magna.

101.3 Endangered Species Consideration

EEB does not expect that this systemic postemergence herbicide will pose a hazard to endangered avian or aquatic wildlife.

In addition, Jim Michaels (FTS-434-9444) of the OES, Olympia Field Office, Washington confirmed on 3-26-87 that currently there were no endangered plants that would be in jeopardy when this herbicide is used on green peas in Washington.

101.4 Adequacy of Toxicity Data

No data were submitted however, the available toxicity data are adequate to complete a risk assessment for the proposed emergency exemption to use Poast on dry edible beans.

However, prior to registration of this herbicide for this use, an acute contact toxicity study on honeybees will be required.

101.5 Adequacy of Labeling

The following labeling should be included in the "Environmentmental Hazard Labeling."

> "Do not apply dirctly to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of wastes."

103.0 Conclusion

EEB has completed the risk assessment for this emergency exemption submitted by the Department of Agriculture for the State of Washington to control annual ryegrass and barnyard grass in green pea fields.

Based on the available toxicity data, and the estimated exposure, use of this herbicide is not expected to pose an acute hazard to non-endangered or endangered wildlife or endangered plants.

Candy Brassard, Enviromental Protection Specialist
Ecological Effects Branch
Hazard Evaluation Divsion (TS-769)

Candy Brassard 3/30/87

Douglas J. Urban, Section Head
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Douglas J Urban 3/31/87

Michael W. Slimak, Chief
Ecological Effects Branch
Hazard Evaluation Divsion (TS-769)

3/31/87

REPORT OF TELEPHONE CALL OR VISITOR

NOTE: Complete this form. Write "NA" where not applicable.

	INCOMING CALL		VISITOR	DATE: 3/26/87
X	OUTGOING CALL		CONGRESSIONAL	TIME OF CALL: 3:00 pm

NAME AND ADDRESS OF CALLER OR VISITOR

Jim Michaels
Olympia Field Office
U. S. Fish and Wildlife Service
Washington

PHONE NO. (Include Area Code or IDS No.): FTS 434-9444

REGISTRATION, ID NO. OR FILE SYMBOL:

DATE OF LATEST SUBMISSION:

BRIEF SUMMARY OF CONVERSATION

I called the OES office in the state of Washington to determine if this emergency use of Poast, (sethoxydim) on green pea fields will pose a hazard to any endangered plant species in the following counties: Clark, Cowlitz, Grays Harbor, Lewis, Thurston, Skagit, Snohomish and Whatcom counties.

ACTION TAKEN OR RECOMMENDED

Jim informed me that currently there are no endangered plant concerns for these counties. Therefore, the use of this herbicide is not expected to pose an hazard to endangered plant species in Washington in these specified counties.

RECORDED BY (Name): Candace Brassard

REFERRED TO (Name):

EPA Hq Form 8500-5 (8-72) REPLACES PR FORM 1-5 WHICH MAY BE USED UNTIL EXHAUSTED.

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